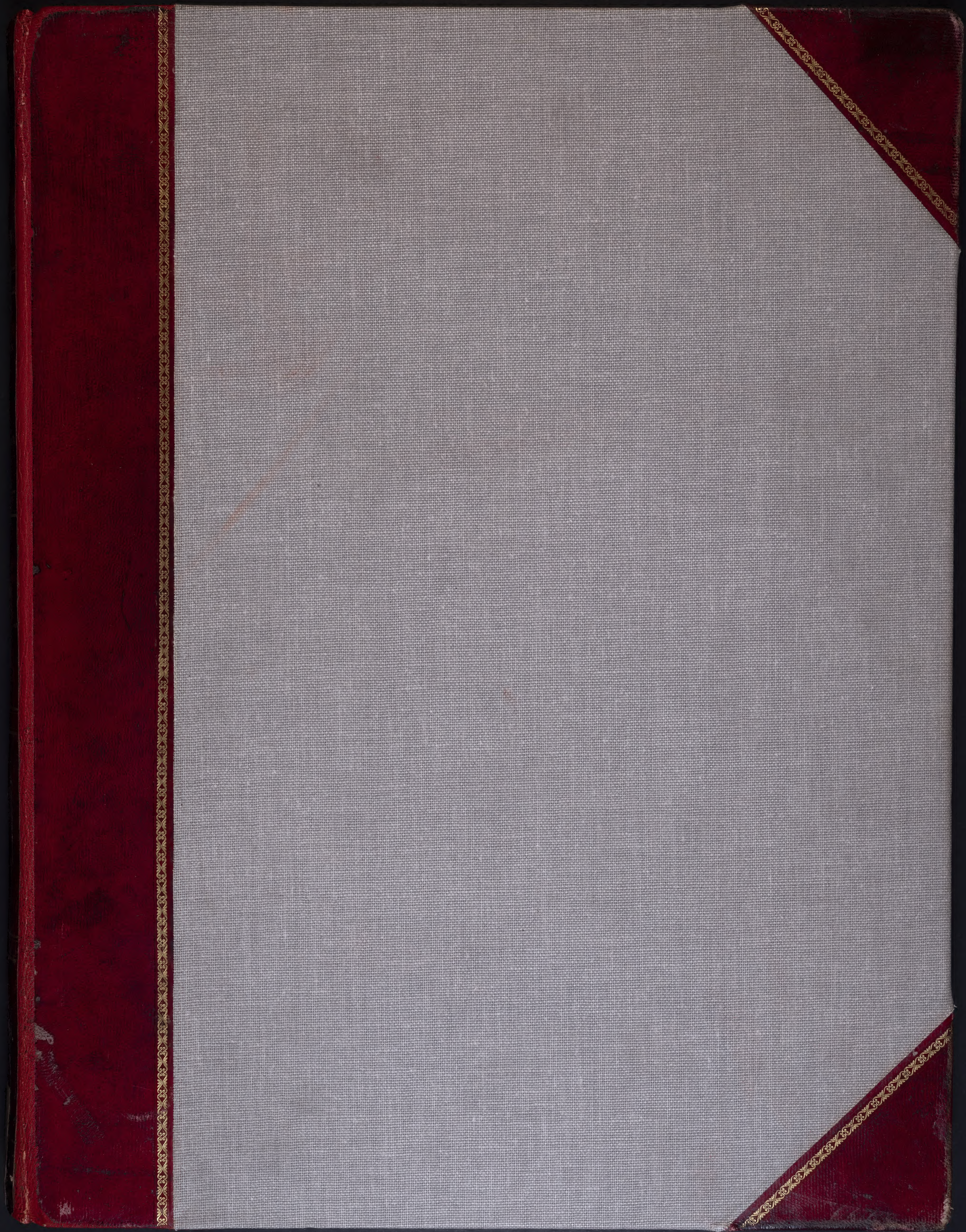




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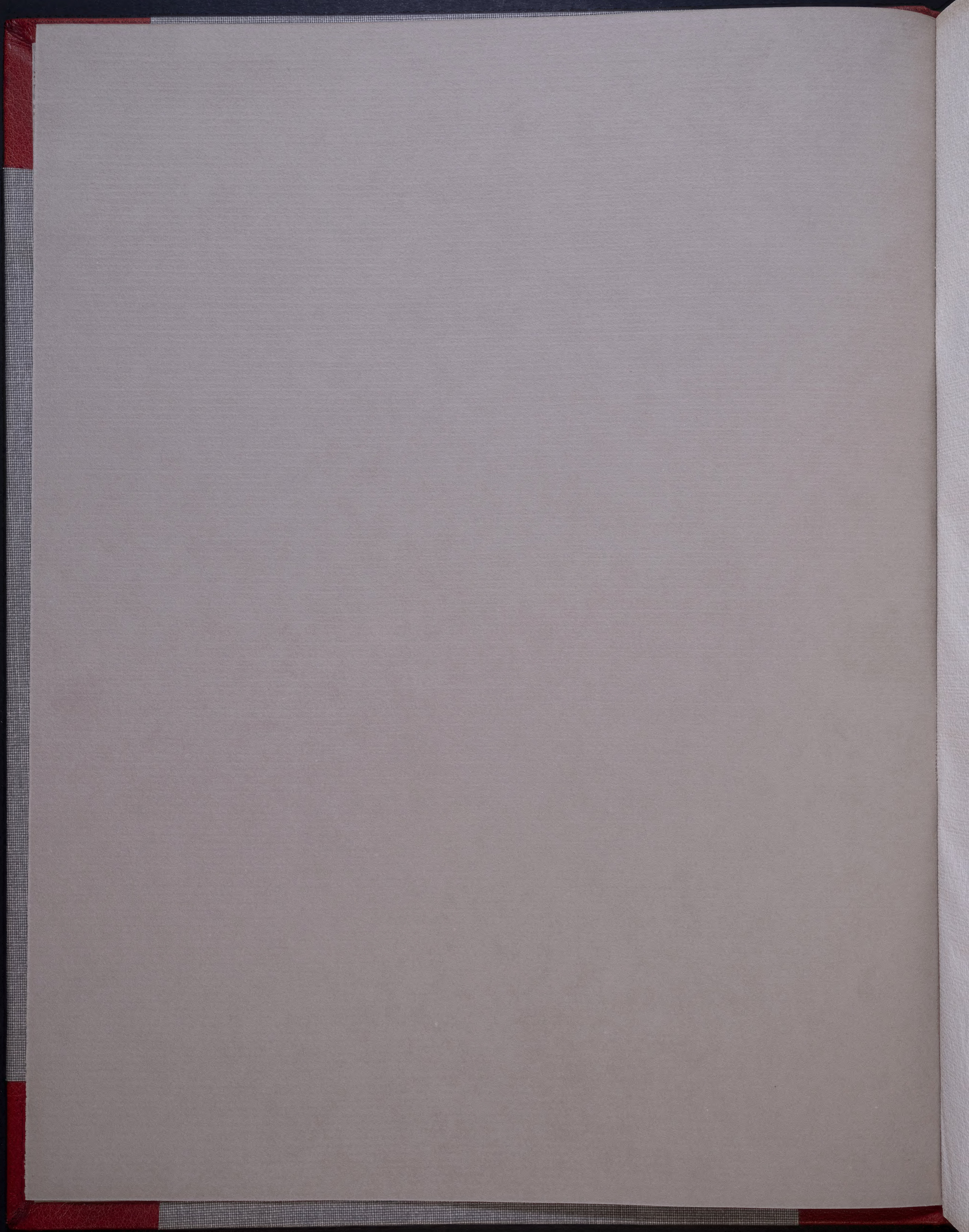
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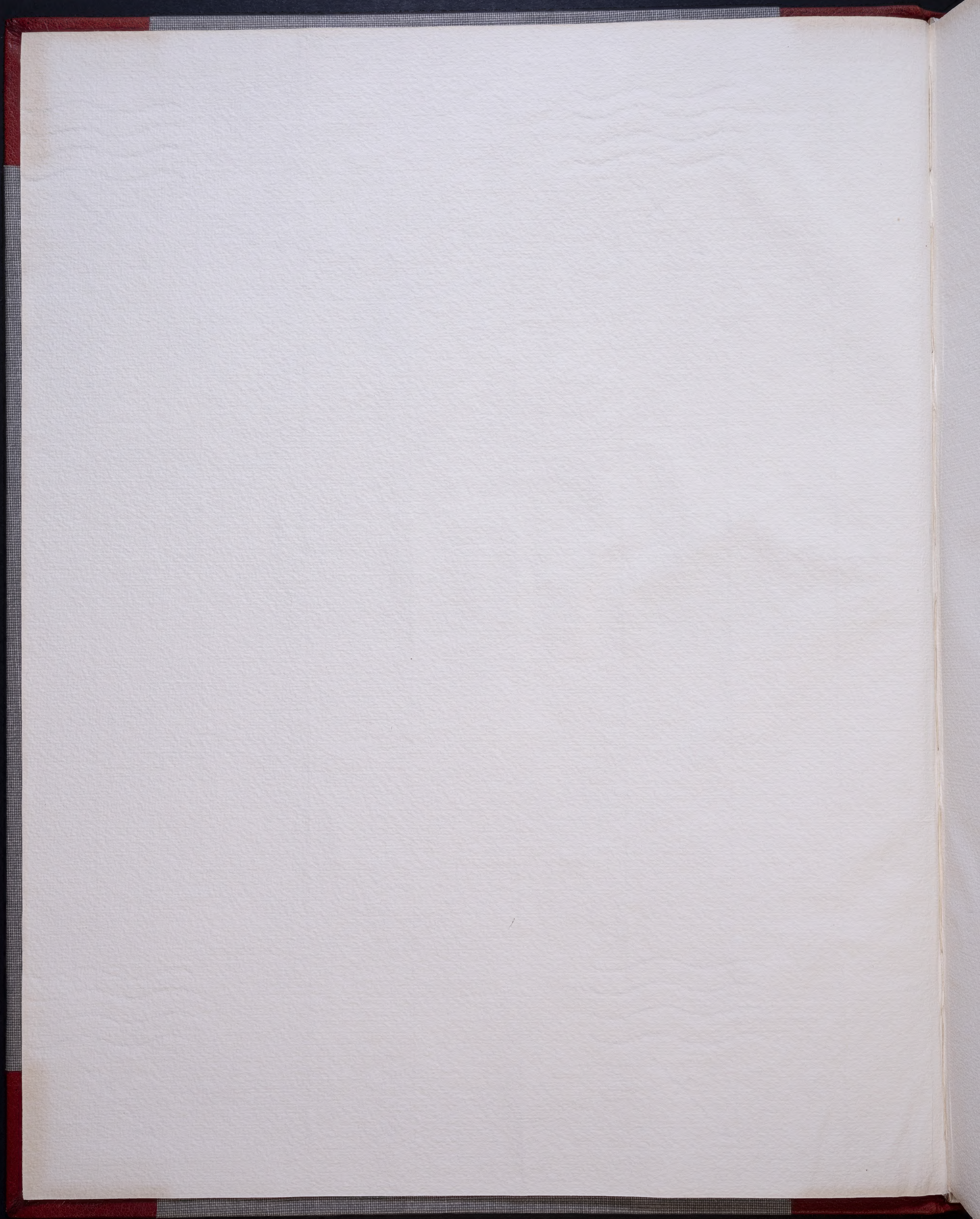
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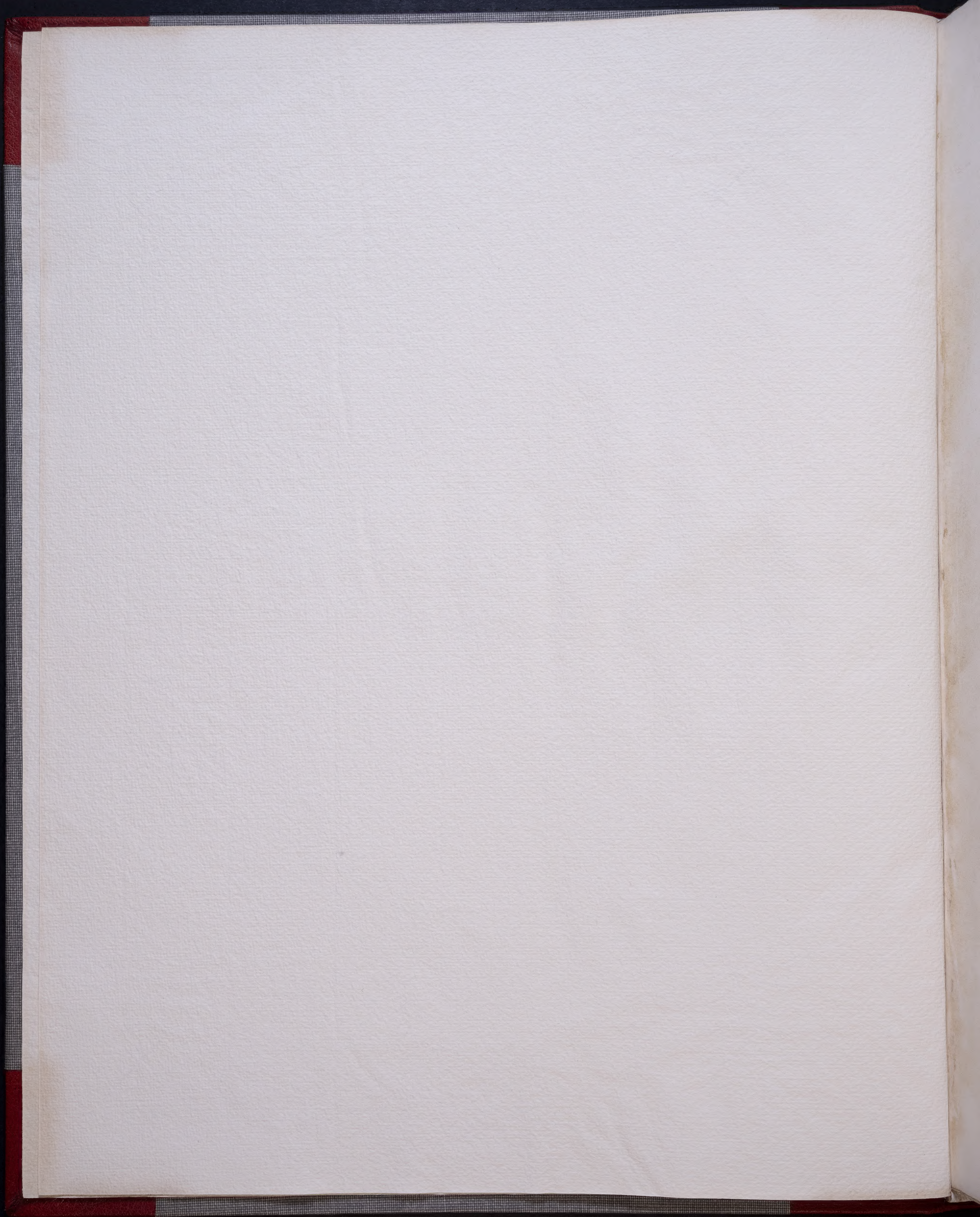












AMERICAN
ORNITHOLOGY;
OR,
THE NATURAL HISTORY
OF
BIRDS INHABITING THE UNITED STATES,
NOT GIVEN BY WILSON.

WITH FIGURES DRAWN, ENGRAVED, AND COLOURED, FROM NATURE.

BY
CHARLES LUCIAN BONAPARTE.

VOL. II.



PHILADELPHIA:
CAREY, LEA & CAREY—CHESNUT STREET.
LONDON:—JOHN MILLER, 40 PALL MALL.

WILLIAM BROWN, PRINTER.

1828.

Eastern District of Pennsylvania, to wit :

***** BE IT REMEMBERED, That on the twentieth day of May, in the fifty-second year of the
* SEAL. * Independence of the United States of America, A. D. 1828, CAREY, LEA & CAREY, of the
* said District, have deposited in this Office the title of a Book, the right whereof they claim
***** as proprietors, in the words following, to wit:

American Ornithology; or, the Natural History of Birds Inhabiting the United States, not given by
Wilson. With Figures Drawn, Engraved, and Coloured, from Nature. By Charles Lucian
Bonaparte. Vol. II.

In conformity to the act of Congress of the United States, entitled "An act for the encouragement of
learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies
during the times therein mentioned." And also to the act, entitled "An act supplementary to an act,
entitled 'An act for the encouragement of learning, by securing the copies of maps, charts, and books,
to the authors and proprietors of such copies during the times therein mentioned,' and extending the
benefits thereof to the arts of designing, engraving, and etching, historical and other prints."

D. CALDWELL,
Clerk of the Eastern District of Pennsylvania.

PREFACE

TO THE SECOND AND THIRD VOLUMES.

THE author's original intention, as announced in the preface to the first volume of this work, was to have devoted the second exclusively to water birds, reserving for the third the few unpublished land birds which he at that time possessed. Having since however, by extending his researches to the most opposite and remote parts of the Union, fortunately succeeded in procuring a sufficient number of land birds to make up a volume, or perhaps two, by themselves, he has changed his original plan for one which is more systematical, and which moreover enables him to complete the series of the numerous and interesting order of PASSERES. All the remaining land birds of the United States will then be, the three large Vultures, the most interesting of which, the Condor, is already drawn; the *Strix cinerea*, the largest Owl known; and the Californian Quail.*

* Two of the Vultures are figured by Temminck in the *Planches Coloriées*; *Cathartes californianus*, Pl. 31, and *Cathartes gryphus*, Pl. 133, the male, and Pl. 408, the young female. The latter species had also been previously figured by Humboldt, *Obs. de Zool.* The third, *Cathartes papa*, was long since figured by Buffon, *Pl. Enl.* 428; and also by Vieillot, *Gal. des Ois.* Pl. 3, under the name of *Gypagus papa*.

Strix cinerea has never been represented, and was ranked by us among those species which from their not having for a long period come under the observation of naturalists, we considered obsolete. We have recently ascertained that it inhabits near Lake Superior, and intend that it shall occupy a plate in a future volume, along with several Hawks, which though represented by Wilson, we think it necessary to figure in various states of plumage in order to clear up the intricacy of their history.

Perdix californica has been figured by Lapeyrouse, Shaw, and others.

By all the land birds of the United States, we must be understood to mean those we have personally ascertained. While discoveries are daily making in the Ornithology of Europe, nay even among the feathered tribes of the island of Great Britain, whose limited extent, peculiar situation, and high degree of civilization, ought to have long since rendered her productions thoroughly known, it would be highly presumptuous to imagine that no bird remained to be discovered in a country embracing such a vast extent of unexplored territory as this. Mr. J. J. Audubon, painter-naturalist, who has devoted twenty years of his life to studying nature in the forests of the West, has gratified us with the sight of several drawings of new species which will appear among the plates he is now engaged in publishing. It is greatly to be wished, for the advancement of American Ornithology, that while his work, so magnificent, but necessarily so slow in coming forth, is preparing, a scientific abstract of his discoveries should be drawn up without delay.

Besides the new discoveries that may be daily expected, many known species will probably hereafter be found entitled to enter the Fauna of these states. They may be arranged in two classes, of which the first will comprise those already well known to inhabit the more northern regions of America, and which may at some future period be ascertained to extend their range within our limits: these are all common to both continents; as instances we may adduce *Loxia pytiopsittacus*, *Saxicola œnanthe*, *Tetrao albus*, and *T. lagopus*, &c. Already in the present volume their companions, *Emberiza lapponica* and *Picus tridactylus*, take their station, for the first time, among the birds of the United States. The other class will include those tropical American birds which in all probability visit, either occasionally or at regular periods, the southern borders of Florida and Louisiana, thus entitling them to a place in this work. The *Falco dispar*, and

PREFACE.

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Columba leucocephala, of the present volumes, may be cited as examples of the latter description.

But in our opinion the most interesting, and towards which we most earnestly desire to direct the attention of American naturalists and collectors, are those species once noticed by former authors, but from not having been since observed, now become in a manner obsolete, though still without being declared nominal. Such was for a period the case with *Garrulus stelleri* of this volume, and is yet with *Sylvia velata* and others established by Vieillot, of whose existence as distinct species there can hardly be any reasonable doubt. In order more clearly to explain our meaning, it may be proper to enter into the following calculations.

In Linné's last edition of his *Systema Naturæ*, a work professing to contain, like all others, all the then known birds of the United States, which had been chiefly taken from the original sources of Catesby and Edwards, only one hundred and eighty-three are assigned to North America. It is true that he was acquainted with several other North American birds which also inhabit other countries, those common to Europe especially; but as many of the one hundred and eighty-three are merely nominal, we may allow them to counterbalance those omitted. Of the entire number, one hundred and three are land birds, all which we have verified either as real or nominal, four excepted, of which *Picus hirundinaceus* alone (a real species) may have escaped Wilson and ourselves, though we do not believe it. Of the three remaining, two, *Lanius canadensis* and *Loxia canadensis*, are now well known to be South American birds given as North American through mistake; and the third, *Sylvia trochilus* of Europe, may have been reckoned as American on account of the resemblance between it and the female of some American Warbler, probably *Sylvia trichas*.

Since the time of Linné however, great attention has been paid to American Ornithology, and very numerous contributions made to the Fauna of the United States, particularly in the standard works of Pennant and Latham. As all these are embodied in Latham's vast compilation, the *Index Ornithologicus*, we shall take that as our guide. We there find that no less than four hundred and sixty-four species are set down as North American! It is hardly necessary to remark how greatly surcharged with nominal species this number must be, when we consider that after the lapse of many years, and the addition of so many genuine species by Wilson and ourselves, the number we admit is still short of four hundred. A work professing to review with care the North American part of Latham's *Index*, species by species, on the plan of our "Observations on the Nomenclature of Wilson's Ornithology," is still a desideratum; and if executed with accuracy and judgment, would be as advantageous to science, as arduous for the naturalist who should undertake it. For the present, leaving what we have to say concerning the water birds to the volume wherein they are to be especially treated of, we shall content ourselves with stating, that out of Latham's four hundred and sixty-four species, two hundred and sixty-nine are land birds. Of these, one hundred and fifty at most are admitted by us, and though it would not be difficult to prove nominal about sixty, there will still remain about sixty others, whose habitat is false, or which are not sufficiently investigated. Such is the state of things to which we call the attention of ornithologists.

However this may be, Wilson only described two hundred and seventy species, of which one hundred and seventy-nine were land birds. Sixteen more are added in the first volume of this work. The second and third will contain an additional sixteen,

PREFACE.

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after which there yet remain five others whose existence we have ascertained, making a total of two hundred and sixteen.*

The large size and importance of some of the birds given in the two present volumes, among which are three Hawks and four Grouse, have obliged us to distribute the sixteen new species that they contain, together with nine others, of which two only are reduced, upon twelve plates. It therefore rested with our publishers to issue one large, or two smaller volumes, and the latter course is that which they have thought proper to adopt.

* These may all be found in our *Synopsis of the Birds of the United States*, and *Appendix*, published in the *Annals of the Lyceum of Natural History* of New-York, Vol. II.



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1 Cooper's Hawk
Falco Cooperii

2 Palm Warbler
Sylvia Palmarum

Drawn from Nature by A. Roder

Engraved by Alexander Lawson

AMERICAN ORNITHOLOGY.

COOPER'S HAWK.

FALCO COOPERII.

Plate X. Fig. 1.

Philadelphia Museum, No. 403.

My Collection.

BUFFON complained of the difficulty of writing a history of Birds, because he already knew eight hundred species, and supposed that there might actually exist fifteen hundred; or even, said he, venturing as he thought to the limit of probability, two thousand! What then would be his embarrassment at present, when nearly six thousand species are known, and fresh discoveries are daily augmenting the number?

The difficulties attending a general work on this subject are not perhaps experienced in an equal degree by one who confines himself to the history of a particular group, or of the species inhabiting a single district. Nevertheless, in a work like the present, which is not a monography limited to one genus or family, but embraces within its scope species belonging to all the different tribes, it is requisite, in order to explain their various relations

and analogies, that the author should be more or less acquainted with the whole system of nature. To attempt, without the aid of methodical arrangement, a subject so vast, and apparently unlimited, would be hopeless. Hence the importance of a correct system of classification; and the construction of one which shall exhibit, as far as practicable, the true affinities of objects, has exercised the attention of the most powerful minds, that have been employed in the study of nature.

That division of the feathered class popularly called Birds of prey, has always been recognized as a separate, and well defined group. In the Linnean system they form the order ACCIPITRES, and were, by that father of the science, distributed into three great natural divisions, which comprise nearly, if not quite, one-fifteenth part of all the known species of birds. The ulterior arrangement of one of these groups, the genus *Falco* of Linné, at present composed of between two and three hundred species, has much divided the opinions of naturalists. From the majestic Eagle, the terror of the husbandman, to the feeblest Hawk, preying on grasshoppers, it is undeniable that there exists in all these birds, a great resemblance in some of the most prominent characteristics; which, being found to predominate in the Fish-hawk, as well as the Kite, and all other species of the Falcon tribe, however dissimilar, indicate their separation as a peculiar family from all other birds. But that they are susceptible of division into smaller groups of inferior rank, no practical ornithologist will for a moment deny. Whether these minor groups shall be considered as trivial and secondary, or whether some of them ought not to be admitted as distinct and independent genera, is a question that has been much agitated, and respecting which, ornithologists will probably for a long time continue to disagree. Equally great authorities might be cited in favour of either of these opinions, which like many others of more importance that

have divided mankind from the beginning of the world, may perhaps after all be considered as merely a dispute about words.

Admitting, however, as seems to be done by all parties, that this great genus may be subdivided with propriety, we look upon it as altogether a secondary question, whether we shall call the minor groups genera, subgenera, or sections; and we deem it of still less consequence, in a philosophical view, whether the names by which these groups are designated, be taken from a learned, or a vernacular language. It is our intention to pursue a middle course. We are convinced of the necessity of employing numerous subdivisions, not only in this, but also in its allied genus *Strix*. These, however, we cannot agree to admit as genera, preferring to call them subgenera, and giving them a name; but when having occasion to mention a species belonging to any of them, to employ the name of the great genus.

The desire of avoiding too great a multiplication of groups, has caused some, even of the first ornithologists of our time, to employ sections that are not natural, and with false or inapplicable characters; and, as if they would compel nature to conform to their preconceived and narrow views, after having assigned decided limits to their groups, to force into them species not only widely different, but that do not even possess the artificial character proposed. We shall not imitate this irrational example. It shall rather be our object to compose natural groups, and, in obedience to this principle, whenever we meet with a group, or even a single species, clearly insulated, it shall at least be pointed out; not so much regarding the number of our subgenera, as the characters that unite the species of which they are respectively composed.

It is objected to the numerous subdivisions that have been proposed in our day, that they pass into, and blend insensibly with each other. This is no doubt true; but is it not the same

with regard to natural groups of every denomination? It is this fact which has induced us to consider them as subgenera, and not as distinct genera. We are told, however, by the advocates for numerous genera, that in giving a name we adopt a genus; but we do not see that this necessarily follows.

There are, we confess, other grounds on which we might be attacked with more advantage. We may perhaps be charged with inconsistency in refusing to admit as the foundation of generic groups in the *Rapaces*, characters, which are allowed, not only by ourselves, but by some of those who are most strenuously opposed to the multiplication of genera, to have quite sufficient importance for such distinction in other families. With what propriety, it might be asked, can we admit *Hydrobates* (*Fuligula*, *Nob.*) as distinct from *Anas*, and the various genera that have been dismembered from *Lanius*, at the same time that we reject, as genera, the different groups of Hawks? To this we can only reply, that we are ourselves entirely convinced, that all the subgenera adopted in our Synopsis among the *Falcones* of North America, are quite as distinct from each other as *Coccyzus* and *Cuculus*, or *Corvus* and *Garrulus*. The latter genus we have admitted after Temminck, who is opposed to new genera among the Hawks; though *Astur* and *Elanus* certainly require to be separated, no less than the two genera that Temminck himself has established in the old genus *Vultur*.

No living naturalist, (with the exception of those, who, through a sort of pseudo-religious feeling, will only admit as genera, groups indicated as such by Linné) has adhered longer than ourselves, to large genera; at the same time that we could not deny the existence of subordinate natural groups. We will not pretend to deny that these are of equal rank with some recognized as genera in other families; and we can only say, that we consider it doubtful, in the present unsettled state of the science,

what this rank ought to be. We therefore, in the instances above quoted, consider it of little importance, whether these groups be considered as genera or subgenera.

But what is certainly of great importance, is, to preserve uniformity in all such cases; to make co-ordinate divisions, and give corresponding titles to groups of equal value. This uniformity, however desirable, cannot, in the actual state of ornithology, be easily attained; and we have decided, after much hesitation, to continue to employ subgenera. In doing this, we are moreover influenced by the great difficulty that is met with, in some cases, in determining the proper place of a species partaking of the characters of several groups, yet not in the least deserving to be isolated; such as *Falco borealis*, which is almost as much an *Astur* as a *Buteo*, and has been placed by authors, according to their different views, in both these groups.

An extensive reform is evidently needed in the department of classification that relates to genera; and we propose, with this view, to undertake at some future period a general work, when, erecting our system on a more philosophical basis, though we may restrict some, and enlarge other genera, we shall in the instances to which we have alluded, as well as in a multitude of others, at least place them all on an equal footing.

Among the several groups into which the Falcon tribe is divided, we come to one composed of about sixty species, well marked, and, if kept within its proper bounds, very natural; to which authors have variously applied the name of *Accipiter*, *Sparvius*, and *Astur*, which last we have adopted.

Found in all parts of the globe, and destroying every where great numbers of birds and small quadrupeds, the Hawks, (by which English name we propose to distinguish this group more particularly,) closely resemble each other in colour and changes of plumage, especially the North American and European species.

They are eminently distinguished from all other Falcons by their short wings, not reaching by a considerable length to the tip of their tail, which is even, or but very slightly rounded; and by their first quill feather or primary, which is very short, while the fourth is constantly the longest. Their bill, suddenly curved from the base, is very strong and sharp; their head is narrowed before, with the eyes placed high, large, and fiery. Their feet are very long, and the toes especially, the middle one of which is much the longest, and all are armed with very strong sharp talons, well seconding the sanguinary nature of these fierce creatures; their outer toe is connected at base by a membrane to the middle one. The female is always one-third larger than the male, and the plumage of both, is, in most species, dark above and white beneath; in the adult barred with reddish or dusky. In the young bird the colour is lighter, the feathers skirted with ferruginous, and the white of the under parts streaked longitudinally with dusky, instead of being barred. The tail is uniform in colour with the back, with almost always a few broad bands of black, and sometimes of white, and a whitish tip.

The Hawks (*Astures*) combine cunning with agility and strength. Sudden and impetuous in their movements, they make great havock, especially among birds that keep in flocks, as Pigeons, Blackbirds, &c., and are the terror of the poultry-yard. Fearless and sanguinary, they never feed, even when pressed by hunger, except on red and warm-blooded animals, whose quivering limbs they tear with savage delight. Birds they pluck very carefully; and quarter, before eating them, but swallow small quadrupeds entire, afterwards ejecting their skins rolled up into a ball. They always pursue and seize their prey upon the wing, not falling upon it from aloft, but rapidly skimming the earth, make their insidious approaches sideways, and singling out their victim, dart upon it with fatal velocity. They never soar, like the

Kites and Eagles, to the upper regions of the atmosphere, and it is only during the nuptial season that they are observed sailing in wide circles in the air. Their favourite haunts during summer are forests, building their nests on trees; in winter they spread over the plains. Though generally observed alone, the male and his companion are seldom far apart. During the youth of their progeny, the parents keep them company in order to teach them to hunt their prey, and at such times they are observed in families.

This group may be further subdivided into two sections, to one of which the name of *Astur* has more strictly been assigned, while the other has been distinguished by those of *Sparvius*, and *Accipiter*. The former, of which the Goshawk of Europe and North America (Black-capped Hawk of Wilson) is the type, is characterized by its wings being somewhat longer, body more robust, and shorter and much thicker tarsi. This is the only species that inhabits the United States and Europe.

The second section, to which the present new species belongs, possessing all its characters in a pre-eminent degree, equally with the Hawk described by Wilson in its adult state as *Falco pensylvanicus*, and in its youth as *Falco velox*, was established on the Sparrowhawk of Europe, *Falco nisus*; but the American species just mentioned are no less typical. The Hawks of this section are more elegantly shaped, being much more slender; their wings are still shorter than in the other section, reaching little beyond the origin of the tail, and their tarsi slender and elongated, with a smooth and almost continuous covering.

Notwithstanding their smaller size and diminished strength, their superior courage and audacity, and the quickness of their movements, enable them to turn the flight of the largest birds, and even sometimes, when in captivity together, to overcome them. We have kept a Sparrowhawk, (*Falco nisus*) which, in the space

of twenty-four hours that he was left unobserved, killed three Falcons which were confined with him.

The inextricable confusion reigning throughout the works of authors who have not attended to the characters of the different groups of this genus, renders it next to impossible to decide with any degree of certainty, whether our *Falco cooperii* has or has not been recorded. Though agreeing imperfectly with many, we have not been able, notwithstanding our most sedulous endeavours, to identify it with any. It is evidently a young bird, and we should not be surprised at its proving, when adult, a known species, perhaps one of the numerous species figured of late, and possibly *Le Grand Epervier de Cayenne* of Daudin, *Sparvius major*, Vieillot, stated to be one-third larger than the European Sparrowhawk. At all events, however, it is an acquisition to the ornithology of these states; and we have ventured to consider it as a new species, and to impose on it the name of a scientific friend, William Cooper, of New-York, to whose sound judgment, and liberality in communicating useful advice, the naturalists of this country will unite with us in bearing testimony; and to whom only the author, on the eve of his departure for Europe, would have been willing to entrust the ultimate revision and superintendence of this work.

The perfect accuracy with which Mr. Lawson may be said to have outdone himself in the delineation of this bird, in all the details of its plumage, bill, and feet, will now at least have established the species in the most incontestible manner.

Our bird agrees very well with the Falcon gentle, *Falco gentilis*, Linné, but as that species is referred to the young of the Goshawk, we have preferred giving it a new name to reviving one that might have created an erroneous supposition of identity. To the young Goshawk, our Hawk is, in fact, extremely similar in colour and markings, being chiefly distinguished from it by the characters of their respective sections, having the tarsi much

more slender and elongated, and the wings still shorter; the tail is also considerably more rounded.

But it is to the sharp-shinned Hawk (*Falco velox*) of Wilson, the *Falco pensylvanicus*, or *Falco fuscus* in its immature plumage, that our Cooper's Hawk bears the most striking resemblance, and is in every particular most closely allied. Even comparing feather by feather, and spot by spot, they almost perfectly agree; but the much larger size of the present, it being more than twice the bulk, will always prevent their being confounded even by the most superficial observer. Another good mark of discrimination may be found in the comparative length of the primaries; the second in *F. cooperii* being subequal to the sixth, while in *F. velox* it is much shorter. The latter has also the fifth as long as the fourth; that, in our species, being equal to the third. The tail is also much more rounded, the outer feather being nearly an inch shorter than the middle one. In *F. velox* the tail is even, the outer feather being as long, or if any thing, longer than the middle. There is no other North American species for which it can be mistaken.

The bird represented in the plate, of which we have seen seven or eight specimens perfectly similar in size and plumage, was a male, killed in the latter part of September, near Bordentown, New-Jersey. The stomach contained the remains of a Sparrow. Another that we procured, was shot on the twelfth of December, while in the act of devouring on the ground, a full-grown Ruffed Grouse which he had killed, though a larger and heavier bird than himself. Mr. Cooper, the friend to whom we have dedicated this species, has recently favoured us with an accurate description of a specimen of a somewhat larger size, shot in the early part of November, on the eastern part of Long Island.

The Male Cooper's Hawk is eighteen inches in length, and nearly thirty in extent. The bill is black, or rather blackish-

brown; the cere greenish-yellow; the angles of the mouth yellow. The irides are bright-yellow. The general colour above is chocolate-brown, the feathers being whitish-gray at base; on the head, and neck above, they are blackish, margined with rufous, pure white towards the base, and grayish at the bottom, the white colour showing itself on the top and sides of the neck, and being much purer on the nucha. The back and rump are the same, but the feathers larger, and lighter coloured, less margined with rufous, more widely grayish at base, and bearing each four regular spots of white in the middle of their length, which are not seen unless when the feathers are turned aside. The whole body beneath is white, each feather, including the lower wing-coverts and femorals, marked with a long, dusky medial stripe, broader and oblanceolate on the breast and flanks, (some of the feathers of which have also a blackish band across the middle,) the throat, and under wing-coverts; the long feathers of the flanks (or long axillary feathers) are white banded with blackish; the vent and lower tail-coverts pure white; the wings are nine inches long, and when folded, hardly reach to the second bar of the tail from the base; the smaller wing-coverts and scapulars, are like the back, the quills brown above, (lighter on the shaft) and silvery-gray beneath, regularly crossed by blackish bands, less conspicuous above; the space between the bands is white on the inner vanes at base; some of the secondaries and tertials are tipped and edged with rusty, and have more and more of white as they approach the body, so that those nearest may in fact be described as white banded with blackish. The first primary is very short, more so than the secondaries; the second is equal to the sixth, the third to the fifth, these two last mentioned being hardly shorter than the fourth, which, as in all *Astures*, is longest. The tail is full eight inches long, reaching five beyond the wings; its colour is ashy-brown, much paler beneath, tipped with whitish, and

crossed by four equidistant blackish bands, nearly one inch in breadth; the tail-coverts at their very base are whitish; the lateral feathers are lighter, and with some white on the inner webs. The legs and feet are yellow, slender, and elongated, but still do not reach, when extended, to the tip of the tail; the tarsus, feathered in front for a short space, is two and three-quarter inches long; as in other *Astures*, the middle toe is much the longest, and the inner, without the nail, is shorter than the outer, but taken with its much longer nail, is longer. The talons are black, and extremely sharp, the inner and the hind ones subequal, and much the largest, while the outer is the most delicate.

The Female is larger, and measures two inches more in length, but in plumage is perfectly similar to the male. As the male we have described and figured, is evidently a young bird, it is very probable, that the adult, after undergoing the changes usual in this group, obtains a much darker and more uniform plumage above, and is beneath lineated transversely with reddish. That in this supposed plumage, the bird has not yet been found, is no reason to doubt its existence, as the species is comparatively rare. Even of the common *Falco fuscus*, though constantly receiving numerous specimens of the young, we have only been able to procure a single one in adult plumage, during a period of four years.

We regret that this is all that is in our power to offer of the history of this species, which, as will be seen from the description, possesses in an eminent degree the characters of the group. From the circumstance of its being found here in autumn and winter, we are led to infer, that it comes to us from the North.

PALM WARBLER.

SYLVIA PALMARUM.

Plate X. Fig. 2.

Motacilla palmarum, GMEL. *Syst.* I, p. 951, Sp. 53, winter dress.

Sylvia palmarum, LATH. *Ind.* p. 544, Sp. 136. VIEILL. *Ois. Am. Sept.* II, p. 21, Pl. 73, (and the other works of the same author,) winter plumage. NOB. *Add. Orn. U. S. in Jour. Ac. Ph.* V, p. 29. ID. *Cat. birds U. S. in Contr. Maccl. Lyc. Ph.* I, p. 16, Sp. 105. ID. *Syn. birds U. S.* Sp. 105, in *Ann. Lyceum, N. Y.* II, p. 78.

Motacilla ruficapilla, GMEL. *Syst.* I, p. 971, Sp. 106, summer dress.

Sylvia ruficapilla, LATH. *Ind.* summer dress, (not of VIEILL.)

Ficedula martinicana, BRISS. *Av.* III, p. 490, Sp. 50, Pl. 22, Fig. 4, perfect plumage.

Le Bimbelé, ou fausse Linotte, BUFF. *Ois.* V, p. 330, winter dress.

Figuier à tele rousse, BUFF. *Ois.* V, p. 306, summer dress.

Palm warbler, LATH. *Syn.* IV, p. 489, Sp. 131, winter dress.

Bloody-side warbler, LATH. *Syn.* IV, p. 489, Sp. 115, (not of PENN.) summer plumage.

Philadelphia Museum.

THIS is one of those lively, transient visitants, which coming in spring from warmer regions, pass through the middle states on their way to still colder and more northern countries, to breed. From the scarcity of the species, its passage has hitherto been unobserved; and it is now for the first time introduced as a bird of the United States. Authors who have heretofore made mention of it, represent it as a permanent resident of St. Domingo, and other Islands of the West Indies, and even describe its nest, and habits, as observed there.

In the United States, it is found during winter in Florida, where it is, at that season, one of the most common birds. In the month of November, they are very abundant in the neighbourhood of

St. Augustine, in East Florida, even in the town, and in other parts of the territory wherever the orange-tree is cultivated, being rare elsewhere. They are found in great numbers in the orange-groves near Charleston, South-Carolina, at the same season, and have also been observed at Key West, and the Tortugas, in the middle of February, and at Key Vacas in the middle of March. Their manners are sprightly, and a jerking of the tail, like the Pewee, characterizes them at first sight from a distance. The only note we have heard them utter, is a simple chirp, very much like that of the Black and Yellow Warbler, *Sylvia maculosa*, (*magnolia* of Wils.) They are fond of keeping among the thick foliage of the orange-trees. A few are observed every year in spring, on the borders of the Schuylkill, near Philadelphia, as well as in the central parts of New-Jersey, on their passage to the North. They breed in Maine, and other parts of New-England, where they are common during summer, and perhaps also in Canada, though probably not extending to the inhospitable climates of Hudson's Bay, whose natural productions are so well known.

The bird represented in the plate, was shot near Bordentown, on the seventeenth of April, in the morning. It was a fine adult male, in the gayer plumage of the breeding season, in which it is now for the first time figured, and a description is subjoined.

Length five inches and a quarter, extent more than eight inches. Bill five-eighths of an inch long, very slender, straight, hardly notched, blackish, paler beneath. Feet dusky-gray, yellowish inside; irides dark brown, nearly black. Crown bright chesnut-bay, bottom of the plumage lead-colour all over, much darker beneath; a well defined superciliar line, and the rudiment of another, on the medial base of the upper mandible, rich yellow: the same colour also encircles the eye; streak through the eyes and cheeks dusky-olive, somewhat intermixed with dull chesnut; upper parts olive-green, each feather being dusky in the middle;

rump and upper tail-coverts yellow-olive; all beneath bright yellow; sides of the neck, breast, and flanks with chesnut streaks; superior wing-coverts blackish, margined and tipped with olive-green, and somewhat tinged with chesnut; inferior wing-coverts yellowish; quills dusky, edged exteriorly with green, the outer one with white on the outer side, two exterior with a large white spot on the inner web at tip.

In the plumage here described, it has been mentioned by several authors, under the name of *Sylvia ruficapilla*, and by Latham is called the Bloody-side Warbler. In that which we are about to describe, it was first made known by Buffon, who adopted the name of *Bimbelé*, given to it in the West Indies, and in this state it is figured by Vieillot, as the *Sylvia palmarum*. The following description is drawn up from a specimen procured in Florida, in winter.

Length five inches; bill half an inch, slender, almost straight, and very slightly notched, blackish, paler beneath; the feet are blackish; irides very dark-brown. The general plumage above, is olive-brown, each feather being dusky along the middle: the feathers of the head are dusky at base, as is the whole plumage, then they are chesnut nearly to the tip, (forming a concealed spot of that colour on the crown) where they are of the common colour, but somewhat darker; the rump and superior tail-coverts are yellow-olive; a well defined yellowish-white line passes over the eye, which is encircled with white; the cheeks are dusky, as well as a streak through the eye; the inferior parts are whitish, slightly tinged with yellowish, and with a few blackish streaks each side of the throat, and on the breast and flanks; the belly is immaculate, and more richly tinged with yellow; the inferior tail-coverts being pure yellow; the wing-coverts are of the colour of the feathers of the back, the blackish centre being more extended and deeper; the wings have no bands; the quill-feathers are blackish, edged

externally with pale yellow-olive, becoming whitish towards the tip; the five outer ones are subequal; the tail is even, its feathers are somewhat pointed, edged externally with yellow-olive, internally with whitish, the outer one also externally whitish; the two outer ones with a large pure white spot on their inner vane at tip, the third and fourth each side with an inner white terminal margin.

In this plumage, this bird resembles so nearly *Sylvia coronata* in its most humble dress, that it is distinguishable only on a close examination. However, the bill is longer, and more slender, the crown-spot chesnut, instead of yellow, the feathers being destitute of the white which is observable in the other by separating the feathers; the rump is olive-yellow, not pure yellow, and that colour extending on the tail-coverts, which it does not in *Sylvia coronata*. The under parts tinged with yellow, and especially the pure yellow tail-coverts, which are pure white in *S. coronata*, will sufficiently distinguish them.

It is a remarkable circumstance, that there is no obvious difference to be observed between the plumage of the sexes, notwithstanding the statements of authors to the contrary. This is the case, however, in *S. coronata*, and in almost all the Warblers that change periodically from a dull to a bright plumage, and in fact, in most birds in which this change takes place.

According to Buffon and Vieillot, this bird is a permanent resident in the West Indies, where, as they state, the name is sometimes applied to it of *Fausse Linotte*. We, however, can perceive scarcely any resemblance, except in its dull state of plumage, to a similar state of the Red-poll Finch. The name of *Bimbelé*, by which it is known among the negroes of those countries, is derived from the recollection of an African bird, to which, probably, the resemblance is not more evident. Unfortunately, this propensity of limited minds to refer new objects, however

distinct, to those with which they are acquainted, seems to have prevailed throughout the world, and is found exemplified no where more absurdly than in the Anglo-American names of plants and animals.

The food of this little Warbler, consists chiefly of fruits and small seeds. Its song is limited to five or six notes; but though neither brilliant nor varied, it is highly agreeable, the tones being full, soft, and mellow. While other birds of its kind build in thickets and humble situations, this proud little creature is said always to select the very lofty tree from which it takes its name, the Palmist, (a species of Palm) and to place its nest in the top, in the sort of hive formed at the base or insertion of the peduncle which sustains the clusters of fruit.

Such are the facts we have gathered from authors; but as the singular description of the nest coincides exactly with the manner of building of the *Tanagra dominica*, and as moreover the Palm Warbler appears not to be known in its gayer vesture in the West Indies, we cannot easily believe that it breeds elsewhere than where we have stated; that is, in the temperate, and even colder regions of America, and that what has been mistaken for its nest, in reality belongs to the above named, or some other bird.

The first accounts of this species were given, as we have already stated, by Buffon, and from him subsequent writers appear to have copied what they relate of it. The bird which he described must have been a very young specimen, as its colours are very dull, much more so than the one figured and described by Vieillot, who supposes, though erroneously, Buffon's specimen to have been a Female. Even Vieillot's, which is certainly our species in its winter dress, is much duller in colour than those we received from Florida; and these again are far less brilliant than the bird in our plate, represented as it appears for a few days in the spring in Pennsylvania and New-Jersey, and is found throughout summer

in Maine; thus exhibiting the several gradations of change which the plumage undergoes.

Naturalists cannot be too circumspect in receiving reports even from the most respectable sources, their own senses affording the only authentic testimony to be relied on. From information derived from Mr. T. Peale, who had no opportunity for making comparisons, we erroneously stated in the first volume of this work, that *Sylvia celata*, Say, was one of the most common birds in Florida during winter, keeping among the orange-trees, &c. All this statement had reference to the present species; and as soon as the specimens brought by Mr. Peale as *Sylvia celata*, were shown to us, the error was immediately perceived. We therefore hasten to correct this mistake, which would be otherwise of more consequence, inasmuch as no one else could for a long time detect it. This species resembles, it is true, *S. celata*, (whose range must remain limited to the Rocky Mountains,) and perhaps still more *S. rubricapilla*, Wilson, but it is not of the same subgenus, *Dacnis*, and it may readily be known by the white spots of the tail-feathers.

When the genus *Sylvia*, containing upwards of two hundred and fifty species, shall have been properly studied, it will be found practicable to divide it into several more sections, subgenera, and even perhaps genera. This bird, along with many other North American species, will constitute a highly natural group, very distinct from the true *Sylvia*, of which *S. atricapilla* may be considered as the type. We presume that it is the group we have in view, to which Mr. Swainson has given the name of *Sylvicola*, in his Synopsis of Mexican birds. Our species is erroneously placed by Buffon among his *Demi-fins*, corresponding to our *Dacnis*, and Wilson's *Worm-eaters*.

WHITE-TAILED HAWK.

FALCO DISPAR.

Plate XI. Fig. 1.

Falco dispar, TEMM. et LAUG. Pl. col. 319, young Female. NOB. *App. to Synopsis of N. A. birds in Ann. Lyc. New-York*, p. 435.

Milvus, (now *Elanoides*) *leucurus*, VIEILL. (*Alcon blanco*, d'Azara) *Nouv. Dict. d'Hist. Nat.* XX, p. 556.

Falco melanopterus, NOB. *Jour. Ac. Ph.* V, p. 28. ID. *Cat. birds U. S.* Sp. 16, in *Contr. Maccl. Lyc.* I, p. 11. ID. *Synopsis of N. A. birds*, Sp. 16, in *Ann. Lyc. N. Y.*

Le Faucon blanc, Sonnini's d'Azara, III, p. 96, Sp. 36.

My Collection.

THIS beautiful Hawk, which we recently discovered to be an inhabitant of North America, is so strikingly similar to the Black-winged Hawk (*Falco melanopterus**) of the old continent, that we have hitherto considered them as identical, contrary to the opinion

* *Falco melanopterus*, Daud. *Orn.* 2, p. 152, Sp. 124. Lath. *Ind. Suppl.* p. VI, Sp. 16.

Falco sonninensis, Lath. *Ind. Suppl.* p. XII, Sp. 38.

Elanus cæsius, Savigny, *Ois. d'Egyp.* p. 98, pl. II, f. 2. Vieill. *Nouv. Dict. d'Hist. Nat.* VIII, p. 240. (now *Elanoides*.)

Elanus melanopterus, Leach *Zool. Misc.* III, p. 4, pl. 122. Vigors *Descr. Austral. birds in Tr. Lin. Soc.* XV, p. 185.

Le Blac, Le Vaillant, *Ois. d'Afr.* I, p. 147, pl. 36, Male, 37, young Male.

Black-winged Falcon, Lath. *Syn. Suppl.* II, p. 28, Sp. 23.

Sonnini's Falcon, Lath. *Syn. Suppl.* II, p. 52, Sp. 59.

The inspection of original drawings, in a collection that Mr. Gray, of the British Museum, was kind enough to show me lately in London, has enabled me to add to these already numerous synonyms, *Falco axillaris*, Lath. *Ind. Suppl.* (*Circus axillaris*, Vieill.!) from New-Holland.



2

Drawn from Nature by A. Wilson.

1. *White-tailed Hawk.*
Spizella Troglodytes.



2. *White-tailed Hawk.*
Spizella Troglodytes.

Engraved by Alexander Wilson.



of Vieillot, whose authority, it is true, could in this case be of little weight, as he had not seen the species, but like many others had merely given it a name; his sole knowledge of it being derived from the work of d'Azara. We have now yielded only to the decision of Temminck, (who has lately introduced the young into his *Planches Coloriées*;) but not without much reluctance, especially as that distinguished ornithologist has evidently not been at the trouble of comparing the two species. Otherwise, he would certainly not have omitted noticing their affinities and differential characters; since in the history of species so closely allied as these two, the differential characters are of more importance and utility than the most laboured descriptions.

This comparison we have carefully instituted between our American specimens, and others from Africa and Java. They agreed perfectly, especially with that from Java, in every, the minutest character, even feather by feather, much better than birds of prey of the same species, and from the same country, do generally. They are even more alike than different specimens from the old continent of the Black-winged itself, since that species is said to vary considerably in the black markings, which extend more or less on the wings in different individuals. Nevertheless, a constant, though trivial, differential character, added to the difference of locality, has induced us to follow Temminck's course, in which we should never have ventured to take the lead. This character consists in the tail being in *Falco dispar* constantly irregular, while in *F. melanopterus*, it is even; or to explain it more clearly, the outer tail-feather is rather the longest in the African, and more than half an inch shorter than the next in the American species. This essential character is much more conspicuous in Temminck's plate than in ours, owing to the tail being spread. In the Black-winged also, the lower wing-coverts are destitute of the black patch so conspicuous in the American bird; a female from Java,

has, however, a slight indication of it, but no trace of it is observable in our African males.

By admitting this to be a distinct species from the Black-winged Hawk, we reject one more of those supposed instances, always rare, and daily diminishing upon more critical observation, of a common habitation of the same bird in the warm parts of both continents, without an extensive range also to the North. A steady and long protracted exertion of its powerful wings, would have been requisite to enable it to pass the vast and trackless sea which lies between the western coast of Africa, the native country of the Black-winged Hawk, and the eastern shores of South America. Yet were the species identical, this adventurous journey must have been performed. For, even admitting several centres of creation, we cannot believe that Nature,* who, notwithstanding her luxuriant abundance, evidently accomplishes all her ends with the greatest economy of means, has ever placed, aboriginally, in different parts of the globe, individuals of the same species; but has always given to each the power of extending its range, according to volition, in any direction where it should find climate, food, or other circumstances most appropriate.

The White-tailed Hawk is one of those anomalous species, which connect the generally received divisions of the great genus *Falco*. It participates in the form and habits of the Kites, (*Milvus*) while in its other relations it approaches the true Falcons, (*Falco*) and at the same time presents traits peculiar to itself. Savigny has therefore very properly considered its near relative, the Black-winged, as the type of a peculiar group, which he elevates to the rank of a genus, but which we for the present shall adopt as a subgenus only. Subsequent observations have confirmed Le

* The word *nature* being taken in so many different acceptations, we think proper to state, that with Ranzani, we mean by it "the aggregate of all created beings, and of the laws imposed on them by the Supreme Creator."

Vaillant's opinion, that the Swallow-tailed Hawk (*Falco furcatus*) is closely related to it; and associated with a few other recently discovered species, they have been considered as a distinct group under Savigny's name of *Elanus*. Vieillot adopted the group as a genus, but, for what reason we know not, has since changed the name to *Elanoides*. The Hawks of this group are readily distinguished from all others, by the superior length of the second primary of their elongated wings, by their bill rounded above, curved from the base, and not toothed, their hirsute cere, thick, short, and wholly reticulated tarsi, half feathered before; toes entirely separated, and powerful nails. The head is flattened above, the gape wide, and the eyes large, deep sunk, and with the orbits greatly projecting above. The colours are also similar in the different species, being white, or pale, (bluish-white, &c.) with more or less of black. The comparatively even tail of the two allied species of which we are treating, eminently distinguishes them from the others of the subgenus, which have the tail exceedingly forked. They are remarkable also for another characteristic, that of having the nails rounded beneath, and not canaliculate, a circumstance that occurs besides only in the subgenus *Pandion*.* This character, which we formerly attributed to all the *Elani*, and which we believe we first observed not to exist in the fork-tailed species, has induced Mr. Vigors, the English ornithologist, to separate the latter as a new genus, under the name of *Nauclerus*.

The Female White-tailed Hawk, is sixteen and a half inches long, and three feet five and a half inches in extent. The bill is black, and measures from the corners of the mouth one inch and a half, the sides of the mouth, posterior portion of the lower mandible, and cere, bright yellow-orange; bristles on the cere

* In *Pandion*, however, it is the middle nail that is rounded, in this species it is the lateral and posterior only.

white, as well as those first on the lores, those nearest the eye black; irides brownish-red; eye-lids white; cilia long and black; orbits black, wider before the eye; front line over the orbits, sides of the head, neck, and body, and whole inferior surface of the bird, together with the thighs, pure white; head pearl-gray, becoming gradually darker from the pure white front towards the neck and back, which are entirely bluish-ash, as well as the rump, scapulars, secondaries, and greater wing-coverts; smaller and middle wing-coverts, deep glossy-black; spurious wing blackish; lining of the wing, and inferior coverts pure white, the latter with a wide black patch; primaries on both surfaces slate-colour, the shafts black, and, the first excepted, margined exteriorly and slightly at tip with dusky, and interiorly with whitish; the margin of the inner web is of a remarkably close texture, with a very soft surface; the first primary is a little shorter than the third; the second longest; the two outer ones are slightly serrated on their outer web. When closed, the wings reach within less than an inch of the tip of the tail. The tail is seven inches long, slightly emarginated, and with the outer feather more than half an inch shorter than the adjoining one; the middle feathers are very pale bluish-slate, all the others pure white; shafts above, black towards the tip, and beneath white; that of the exterior tail-feather white, tipped with dusky above towards the base; feet bright yellow-orange; tarsus one inch and a half long, feathered in front half its length, the remainder covered with small reticulated scales; toes separated to the base; nails large, black, very acute, and with the exception of the middle one, perfectly rounded beneath; the middle one is very sharp on the inner side.

The Male is of a smaller size; the upper surface, instead of being bluish-slate, is more of a dirty grayish, slightly tinged with ferruginous; the tail is less purely white. These sexual differences are the more worthy of note, as they are the reverse of what is

exhibited in other Hawks. It is, however, possible, that they are not to be found in very old males.

The young of both sexes, but especially the young males, are somewhat darker, and are strongly tinged with ferruginous, principally on the head, neck, and wings; the breast being entirely of that colour. A specimen of the African species in this state, is figured by Le Vaillant, whose plates in general are tolerably accurate; but how great is the disappointment of the ornithologist to find the tarsi represented as covered distinctly with plates, as in other Hawks! We cannot let pass this opportunity of exhorting engravers, draftsmen, and all artists employed on works of Natural History, never to depend on what they are accustomed to see, but in all cases to copy faithfully what they have under their eyes; otherwise, taking for granted what they ought not, they will inevitably fall into these gross errors. Even the accurate Wilson himself, or rather perhaps his engraver, has committed the same error in representing the feet of the Swallow-tailed Hawk. Of what consequence, will it perhaps be said, is the form of the scales covering the foot of a Hawk? But these afford precisely one of the best representative characters of groups, and it will, therefore, not be thought unnecessary to caution artists in this, and similar cases.

The young, as described by Temminck, is in a more advanced stage of plumage; the front, forepart of the neck, thighs, flanks, and under tail-coverts are pure white; the breast and belly are of the same colour, but are marked with reddish spots, and brown lines; the occiput, nucha, back, and scapulars are brownish, mixed with whitish, and more or less tinged with cinereous; all these feathers having wide margins of whitish and reddish; the upper tail-coverts are black, with reddish margins; the inferior marbled with black and white; the quills are bluish, terminated with white; the tail is of a grayish-white, with black shafts; all the feathers have dark cinereous towards the point, and are tipped with white.

This species is an inhabitant of a great portion of the American continent, as the *Alcon blanco* of Paraguay, so well described by d'Azara, is undoubtedly the same bird. Vieillot undertook to classify it from d'Azara's description, applying to it the name of *Milvus leucurus*; but after more attentive consideration, he perceived that it was not a *Milvus*, but an *Elanus*. He consequently removed it to that genus, which he called *Elanoides*, at the same time asserting, that with the Swallow-tailed Hawk, it ought to constitute a different section from the Black-winged Hawk; from which, upon actual comparison, it is with difficulty shown to be even specifically distinct! Such are the absurdities into which authors are betrayed through the highly reprehensible practice to which some are addicted, of attempting to classify, and name, animals they have never seen, from the descriptions or mere indications of travellers. Though by such means, they may sometimes gain the credit of introducing a new species, and thus deprive future observers who may risk their fortunes, or even their lives, in pursuit of imperfectly known animals, of their best reward, they cannot fail to incur the merited reprobation of all honourable and fair-dealing naturalists.

Though this bird ranges so widely over the American continent, it is every where a rare species, and in the United States appears to be confined to the southern extremity. The specimen figured in the plate of the natural size, was shot in December, in the neighbourhood of St. Augustine, East Florida, at the residence of my near relation, Colonel Achilles Murat, whose kind hospitality afforded to Mr. Titian Peale every facility for the prosecution of his scientific researches. It was observed by Mr. Peale about the dawn of day, sitting on the dead branch of an old live-oak, attentively watching the borders of an adjacent salt-marsh which abounded with *Arvicola hispidus*, and the different species of Sparrow, which make their residence in the Southern parts of the union. It was very shy, and on his approach, it flew in easy

circles at a moderate elevation, and such was its vigilance, that the greater part of a day was spent in attempting to get within gun-shot. At length the cover of interposing bushes enabled him to effect his purpose. It was a beautiful female, in perfect adult plumage. This sex in the perfect state, is now for the first time represented, Temminck's plate representing the young female only; and even the figures of the African analogue in Le Vaillant's work exhibit only the male in the young and adult states. As usual in the tribe of predaceous birds, the female is much larger than the male, and is therefore entitled to precedence.

Though this species is so rare, its near relative, the Black-winged Hawk, appears on the contrary to be very numerous. In Africa, where it was first discovered, and which is probably its native country, it is rather a common species, and has a very extensive range. Le Vaillant frequently observed it on the eastern coast of that little-known continent, from Duyven-Hoek to Caffraria, where, however, it is less common. The same traveller found it to inhabit also in the interior, in the Cambdebo, and on the shores of the Swart-kop, and Sunday rivers. It is very common in Congo, and numerous also in Barbary, Egypt, and far-distant Syria. The researches of Ruppel in the interior of North-Eastern Africa, already so productive, and from which so much more may be expected, have furnished specimens of this species, of which we owe two to the kindness of Dr. Creitzschmaer, the learned and zealous Director of the Museum of the free city of Frankfort, an institution which has risen up with such wonderful rapidity. We are also informed, that it is an inhabitant of India, which is rendered probable by a specimen from Java in my collection. It is found in New-Holland, being numerous in the autumn of New South Wales, where it is migratory, and preys chiefly on field-mice, but is seldom known to attack birds. It is there observed at times to hover in the air, as if stationary and

motionless. Though occasionally met with on the African coast of the Mediterranean, not a solitary individual has ever been known to visit the opposite shores of Italy, Spain, or Turkey, nor has it been met with in any other part of Europe.

When at rest, it is generally seen perched on high bushes, where the pure white of the lower parts of its body renders it very conspicuous at a distance. It utters a sharp piercing cry, which is often repeated, especially when on the wing, though Mr. Peale assures us, that our individual uttered no cry. Like its closely related species, it does not attack small birds, except for the purpose of driving them from its favourite food, which consists of hemipterous insects, chiefly of the *Gryllus* and *Mantis* genera, as well as other insects, and some reptiles. In the stomach of our specimen, however, Mr. Peale found, besides the usual food, fragments of an *Arvicola hispidus*, and one or two feathers apparently of a Sparrow: but it is not a cowardly bird, as might be suspected from its affinity to the Kites, and from its insignificant prey, since it successfully attacks Crows, Shrikes, and even the more timid birds of its own genus, compelling them to quit its favourite haunts, which it guards with a vigilant eye. They build in the bifurcation of trees. The nest is broad and shallow, lined internally with moss and feathers. The female is stated to lay four or five eggs; the nestlings at first are covered with down of a reddish-gray colour.

The African species is said to diffuse a musky odour, which is retained even after the skin is prepared for the Museum: but we are inclined to believe, that it is in the latter state only that it possesses this quality. Mr. Peale did not observe any such odour in the bird he shot, but being obliged, for want of better food, to make his dinner of it in the woods, found it not unpalatable.

FEMALE CÆRULEAN WARBLER.

SYLVIA AZUREA.

Plate XI. Fig. 2.

See WILSON'S *American Ornithology*, *Cærulean Warbler*, *Sylvia cærulea*, Vol. II, p. 141,
Pl. 17, fig. 5, for the Male.

Sylvia azurea, STEPHENS, *cont.* SHAW'S *Zool.* X, p. 653. *NOB. Obs. Jour. Ac. Nat. Sc.*
Ph. IV, p. 193, Male.

Sylvia bifasciata, SAY, in *Long's Exp. to the Rocky Mountains*, I, p. 170, Male.

Philadelphia Museum, No. 7309, Male; 7310, Female.

THE merit of having discovered this bird, is entirely due to the Peale family, whose exertions have contributed so largely to extend the limits of Natural History. The male, which he has accurately described, and figured, was made known to Wilson by the late venerable Charles Wilson Peale, who alone, and unaided, accomplished an enterprise, in the formation of the Philadelphia Museum, that could hardly have been exceeded under the fostering hand of the most powerful government. To the no less zealous researches of Mr. Titian Peale, the discovery of the female is recently owing, who moreover evinced his sagacity by determining its affinities, and pointing out its true place in the system. Although it preserves the principal characters of the male, yet the difference is sufficiently marked to deserve an especial notice in this work.

The specimen here represented, was procured on the banks of the Schuylkill, near Mantua village, on the first of August, 1825. It was very active, skipping about on the branches of an oak,

attentively searching the leaves, and crevices of the bark, and at intervals taking its food on the wing in the manner of the Fly-catchers. It warbled in an under tone, not very unlike that of the Blue-gray Fly-catcher of Wilson, (*Sylvia cœrulea*, L.) a circumstance that would lead to the supposition of its being a male in summer dress, but on dissection it proved to be a female.

The Female Azure Warbler is four and three-quarter inches long, and eight and a quarter in extent.* Bill blackish above, pale bluish beneath; feet light blue; irides very dark brown; head and neck above, and back, rich silky-green, brighter on the head, and passing gradually into dull bluish on the rump; line from the bill over the eye whitish, above which is the indication of a blue-black line widening behind; a dusky streak passes through the eye; cheeks dusky greenish; beneath entirely whitish, strongly tinged with yellow on the chin; sides of the neck, breast, flanks, and vent, streaked with dark bluish; the base of the whole plumage is bluish-white; inferior tail-coverts pure white; wings and tail very similar to those of the male, though much less brilliant; smaller wing-coverts bluish, tipped with green; middling and large wing-coverts blackish, widely tipped with white, constituting two very apparent bands across the wings, the white slightly tinged with yellowish at tip; spurious wing blackish; quill-feathers blackish, edged externally with green, internally and at tip with whitish, the three nearest the body more widely so; the inferior wing-coverts white; tail hardly rounded, feathers dusky slate, slightly tinged with bluish externally, and lined with pure white internally, each with a white spot towards the tip on the inner web. This spot is larger on the outer feathers, and decreases gradually until it becomes inconspicuous on the two middle ones.

* The dimensions given by Wilson of the male must be rather below the standard, as they are inferior to those of the female, whereas all the specimens we examined were larger, as usual.



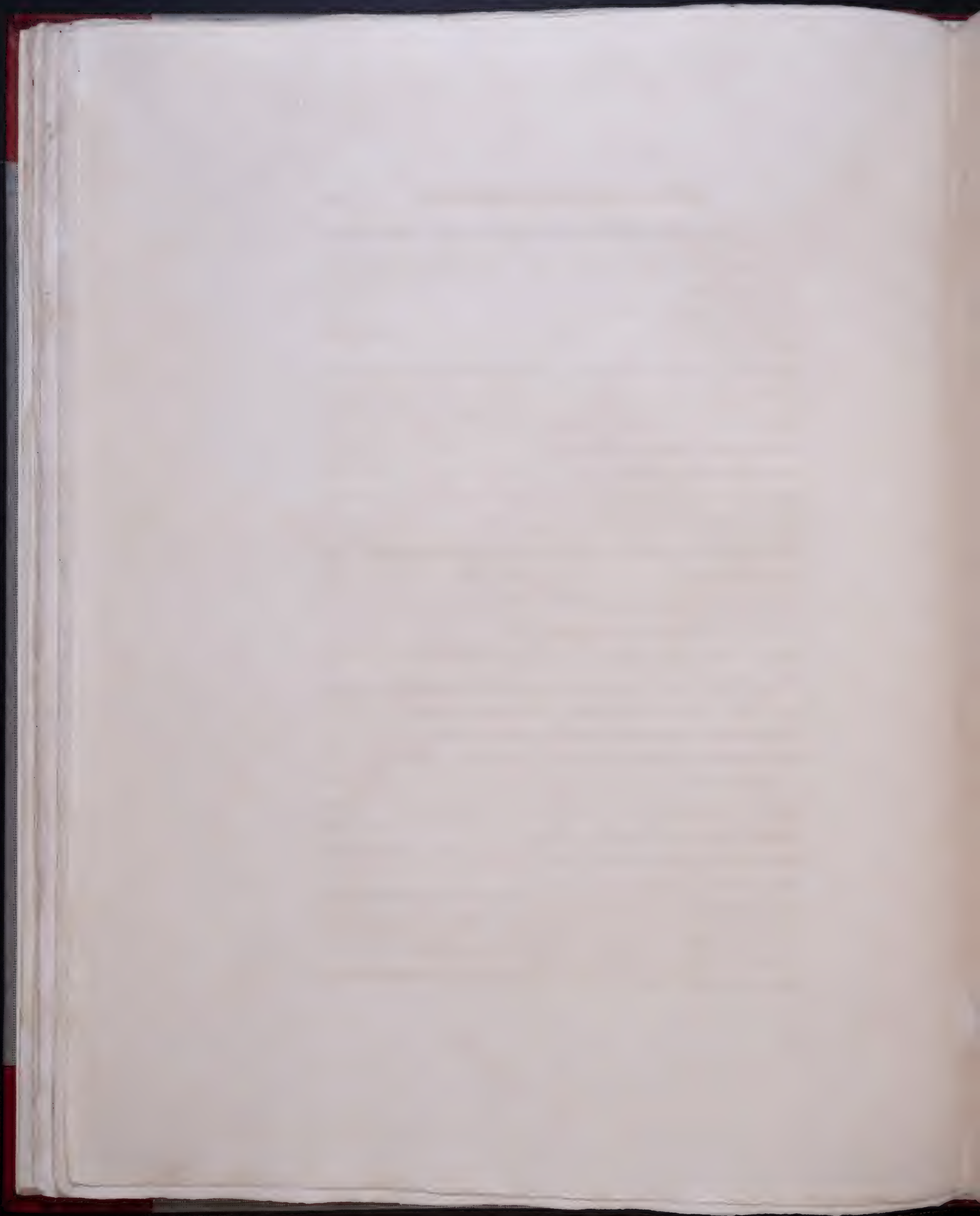
Drawn from Nature by J. Audubon

Blue Hawk or Hen Harrier.

12

Falco Cyaneus

Engraved by J. G. Thompson



The description of the male need not here be repeated, having been already given with sufficient accuracy by Wilson, to whose work the reader is referred. On a comparison of the description and figures, he will find that the chief difference between the sexes consists in the female being green instead of blue, in her wanting the black streaks, and in being tinged with yellow beneath.

We have to regret our inability to add much to Wilson's short and imperfect account of the species. It is by no means more common at this time, than it was when he wrote; which may account for the difficulty of ascertaining the period of its migrations, and for the circumstance of our having never met with the nest, and our want of acquaintance with its habits. We can only add to its history, that it is found in the Trans-Mississippian territory; for the *Sylvia bifasciata* of Say, accurately described in Long's first expedition, is no other than the male. We have examined the specimen shot at Engineer Cantonment.

Although the undisputed merit of first making known this species belongs to Wilson, yet the scientific name that he applied to it cannot be retained, inasmuch as it is pre-occupied by the Blue-gray Warbler, a Linnean species, which Wilson placed in *Muscicapa*, but which we consider a *Sylvia*, notwithstanding that it does in some degree aberrate from the typical species of that genus.* Under such circumstances, we cannot hesitate in adopting the name substituted by Mr. Stephens, the continuator of Shaw's compilation.

* See my *Observations on the Nomenclature of Wilson's Ornithology*.

BLUE HAWK, OR HEN-HARRIER.

FALCO CYANEUS.

Plate XII.

See WILSON'S *American Ornithology*, Vol. VI, p. 67, Pl. 51, fig. 1, for the young,
(under the name of Marsh-Hawk, *Falco uliginosus*.)

Falco cyaneus, LINN. *Syst.* I, p. 126, Sp. 10. GMEL. *Syst.* I, p. 276, Sp. 10. *Iter Poseg.* p. 27, adolescent Male. LATH. *Ind. Orn.* I, p. 39, Sp. 94. MONTAGUE, in *Trans. Lin. Soc.* IX, p. 182. MEYER, *Tasch. Deutschl. Vog.* I, p. 145. TEMM. *Man. Orn.* I, p. 72. RANZ. *El. Zool.* III, Pl. 7, p. 137, Sp. 28. BREHM. *Lehrb. Eur. Vog.* I, p. 59. SELBY, *Ill. Brit. Orn.* I, p. 26, Pl. 10, fig. 1, Male, fig. 2, Female. SAVI, *Orn. Tosc.* I, p. 63. NOB. *Cat. and Syn. Birds U. S.* Sp. 22.

Falco pygargus, LINN. *Syst.* I, p. 126, Sp. 11. GMEL. *Syst.* I, p. 277, Sp. 11, Female and young.

Falco hudsonius, LINN. *Syst.* I, p. 128, Sp. 19. GMEL. *Syst.* I, p. 277, Sp. 19, young, American.

Falco bohemius, GMEL. *Syst.* I, p. 276, Sp. 107. LATH. *Ind.* p. 38, Sp. 93, adult Male.

Falco albicans, GMEL. *Syst.* I, p. 276, Sp. 102. LATH. *Ind.* p. 38, Sp. 93, adult Male.

Falco griseus, GMEL. *Syst.* I, p. 275, Sp. 100. LATH. *Ind.* p. 37, Sp. 86. GERARD. *Tabl. Elem.* p. 37, adolescent Male.

Falco montanus, var. B. GMEL. *Syst.* I, p. 278, Sp. 106. LATH. *Ind.* p. 48, Sp. 116.

Falco cinereus, *It. Poseg.* p. 27, adolescent Male.

Falco albicollis, LATH. *Ind.* p. 36, Sp. 81, adult South American Male.

Falco buffonii, GMEL. *Syst.* I, p. 277, Sp. 103, Female and young, American.

Falco uliginosus, GMEL. *Syst.* I, p. 278. LATH. *Ind.* p. 40, Sp. 95. SABINE, *Zool. App. to Frankl. Exp.* p. 671, young American.

Falco rubiginosus, *It. Poseg.* p. 29. LATH. *Ind.* p. 27, Sp. 56, young.

Falco ranivorus, DAUDIN, *Orn.* II, p. 170. LATH. *Ind. Suppl.* p. 7, young.

Falco europogistus, DAUD. *Orn.* II, p. 110, adolescent Male.

Circus europogistus, VIEILLOT, *Ois. Am. Sept.* I, p. 36, Pl. 8, adolescent Male.

Circus hudsonius, VIEILL. *l. c.* I, p. 36, Pl. 9, young.

Circus uliginosus, VIEILL. *l. c.* I, p. 37, Female and young.

Circus variegatus, VIEILL. *l. c.* I, p. 37, Male changing.

- Circus gallinarius*, VIEILL. *Nouv. Dict. d'Hist. Nat.* IV, p. 459. *Circus cyaneus*,
ID. XXXI, p. 410.
- Circus cyaneus*, BOIE. *Circus ranivorus*, VIEILL. *Nouv. Dict. d'Hist. Nat.* IV, p.
456, young, African.
- Falco strigiceps*, NILLS. *Orn. Suec.* I, p. 21.
- Falco torquatus*, BRISS. *Orn.* I, p. 345, Sp. 7. ID. 8vo. p. 100, Male and Female,
BRUNN. Sp. 14.
- Falco montanus cinereus*, BRISS. *Orn.* I, p. 355, Sp. 9, Var. A. ID. 8vo. p. 112,
adolescent Male.
- Accipiter Freti Hudsonis*, BRISS. *Orn.* VI, App. p. 18, Sp. 47.
- Lanarius cinereus*, BRISS. *Orn.* I, p. 365, Sp. 17. ID. 8vo. p. 106.
- Lanarius albicans*, BRISS. I, p. 367, Sp. 18.
- Subbuteo*, GESSNER, *Av.* p. 48.
- Pygargus accipiter*, RAY, *Syn.* p. 17, Sp. 5. WILL. *Orn.* p. 40, Pl. 7.
- Falco plumbeus, cauda tessellata*, KLEIN, *Av.* p. 52, Sp. 22.
- Lanarius*, ALDR. *Orn.* I, Pl. 381, 382, adult Male.
- Lanarius cinereus, sive Falco cinereo-albus*, FRISCH, Pl. 79, 80, adult Male.
- Falco montanus secundus*, ALDR. WILL. Pl. 9, adult Male.
- Albanella, Storia degli Ucc.* I, Pl. 35, adult Male.
- Falco Pygargo*, ID. I, Pl. 31, Female.
- Autre Oiseau St. Martin*, BELON, *Hist. Ois.* p. 104.
- L'Oiseau St. Martin*, BUFF. *Ois.* I, p. 212. ID. Pl. enl. 459, adult Male. GERARDIN,
Tabl. Elem. Orn. I, p. 43.
- La Soubuse*, BUFF. *Ois.* I, p. 215, Pl. 9. ID. Pl. enl. 443, young Female, 480, young
Male. GERARDIN, *Tabl. Elem. Orn.* I, p. 37, Female and young.
- Le Grenouillard*, LE VAILL. *Ois. Afrique* I, p. 63, Pl. 23, young.
- Kore oder Halbweyhe*, BECHST. *Tasch. Deutsch.* p. 25, Sp. 20. MEYER & WOLF, *Ois.*
d'Allem. liv. 27, Pl. 5, adult Male, Pl. 6, Female. NAUMANN, *Vog. Deutsch. ed. 2.*
I, Pl. 39, fig. 1, adult Male, fig. 2, adult Female, Pl. 38, fig. 2, young Male.
- Mause Habicht, Missilauche*, MEYER, *Boehm. Abh.* 6, p. 313, adult Male.
- Blue-Hawk*, EDW. V, p. 33, Pl. 225, adult Male.
- Marsh-Hawk*, EDW. p. 173, Pl. 291. PENN. *Arct. Zool.* Sp. 105. LATH. *Syn.* I, p. 90,
Sp. 75, Var. A. Female and young.
- Ash-coloured mountain Falcon*, LATH. *Syn.* I, p. 94, Sp. 78. Var. A. adolescent Male.
- Hen-Harrier*, EDW. Pl. 225, very old Male. WILL. (Angl.) p. 172. ALB. II, Pl. 5.
HAYES, *Brit. Birds*, Pl. 1. LEWIN, *Brit. Birds*, I, p. 18. PENN. *Brit. Zool.* I, Sp. 58,
p. 28. LATH. *Syn.* I, p. 88, Sp. 74. ID. *Suppl.* p. 22, adult Male.
- Ring-tail Hawk*, EDW. III, pl. 107. PENN. *Arct. Zool.* Sp. 106, Female and young.

- Ring-tail*, WILL. (Ang.) p. 72. ALB. III, Pl. 3. HAYES, *Brit. Birds*, Pl. 2. LEWIN, *Brit. Birds*, I, Pl. 18, Female. Id. Pl. 2, fig. 4, the egg. PENN. *Brit. Zool.* Sp. 59. LATH. *Syn.* I, p. 89, Sp. 75. Id. *Suppl.* p. 22, Female and young.
- White-rumped Bay Falcon*, LATH. *Syn.* p. 54, Sp. 34, Var. B. young.
- Hudson's Bay Ring-tail*, LATH. *Syn.* I, p. 91, Sp. 76, young.
- White Lanner*, LATH. *Syn.* I, p. 87, Sp. 73, adult Male.
- Gray Falcon*, PENN. *Brit. Zool.* I, Sp. 49. LEWIN, *Brit. Birds*, I, Pl. 15. LATH. *Syn.* I, p. 82, Sp. 67, adolescent Male.
- New-York Falcon*, PENN. *Arct. Zool.* II, p. 209, adolescent Male.
- Ranivorous Falcon*, LATH. *Syn. Suppl.* Female and young. *White-necked Falcon*, LATH. *Syn. Suppl.* p. 30, Sp. 101, adult Male, South American.
- Cayenne Ring-tail*, LATH. *Syn.* I, p. 91, Sp. 76, Var. A. young.
- Falco glaucus*, the sharp-winged hawk, of a pale sky-blue colour, the tip of the wings black, BARTR. *Trav.* p. 290, adult Male.
- Falco subcaeruleus*, the sharp-winged hawk, of a dark or dusky blue colour, BARTR. *Trav.* p. 290, adolescent Male.
- Falco ranivorus*, the Marsh-hawk, BARTR. *Trav.* p. 290, young.

Philadelphia Museum.

My Collection.

As will be perceived upon a slight inspection of our long and elaborate list of synonyms, this well-known species is found in almost every part of the globe; and not only does it seem to have been considered every where distinct, but nearly every different appearance which it assumes during its progress through the various and extraordinary changes that its plumage undergoes according to sex and age, has in each country given rise to a nominal species. At the same time however that names were thus inconsiderately multiplied for one bird, two, really distinct, were always confounded together. Analogous in their changes, similar in form and plumage, it was reserved for the acute and ingenious Montague, to point out the difference, and establish the two species by permanent characters. The new one was called by him *Falco*

cineraceus, and is known by the English name of Ash-coloured Harrier. It is figured and accurately described in all its states of plumage by Vieillot, in his *Galerie des Oiseaux*, where he has dedicated it to its discoverer, calling it *Circus Montagui*; thus fully apologising for having in his article *Busard*, of the New Dictionary of Natural History, declared it to be a state of the other. How far, however, it may be considered a compliment to change the name given to a species by its discoverer, in order to apply even his own to it, we are at a loss to imagine.

The principal distinctive characters of the two species are to be found in the relative length of the wings and tail, and in the proportional lengths of the primaries. In the Ash-coloured Harrier, the sixth primary is shorter than the first, the second is much longer than the fifth, and the third is the longest; the wings when closed reach to the tip of the tail. In the Hen-Harrier, the first primary is shorter than the sixth, the second subequal to the fifth, and the third equal to the fourth, the longest; the wings closed, not reaching by more than two inches to the tip of the tail, which is also but slightly rounded in the latter, while in the Ash-coloured it is cuneiform. Other minor differences are besides observable in the respective sexes and states of both; but as those we have indicated are the only ones that permanently exist, and may be found at all times, we shall not dwell on the others, especially as Montague's species appears not to inhabit America. We think proper to observe, however, that the adult male of *Falco cineraceus* has the primaries wholly black beneath, while that of the *F. cyaneus* has them black only from the middle to the point; and that the tail-feathers, pure white in the latter, are in the former spotted beneath. The female in our species is larger than the corresponding sex of the other, though the males in both are nearly of equal size; and the collar that surrounds the face is strongly marked in ours, whereas it is but little apparent in the other.

The *F. cineraceus* has two white spots near the eyes, which are not in the *F. cyaneus*. The young of the former is beneath rusty without spots. Thus slight, but constant differences, are seen to represent a species, while the most striking discrepancies in colour, size, and (not in this, but in other instances) even of form, prove mere variations of sex or age! We cannot wonder at the two real species having always been confounded amidst the chaotic indications of the present.

Even Wilson was not free from the error which had prevailed for so long a period in scientific Europe, that the Ring-tail and Hen-Harrier were two species. Though he did not publish a figure of the present in the adult plumage of the male, he was well acquainted with it as an inhabitant of the Southern states; for there can be no doubt that it is the much-desired *Blue Hawk* which he was so anxious to procure; the only land-bird he intended to add to his Ornithology, or at least the only one he left registered in his posthumous list. It was chiefly because he was not aware of this fact, and thought that no Blue Hawk existed in America corresponding to the European Hen-Harrier, that Mr. Sabine, in the Appendix to Franklin's Expedition above quoted, persisted in declaring that the Marsh-Hawk was a distinct species peculiar to America, of which he supposed the Hudson's Bay Ring-tail to be the young. The differences which he detected on comparing it with the European Ring-tail, must have been owing to the different state of plumage of his specimen of this ultra-changeable species. If, however, he had not mentioned the colours merely, as bringing it nearer to the Ash-coloured Falcon of Montague, we might be inclined to believe that the specimen he examined was indeed a young bird of that species, which, though as yet unobserved, may after all possibly be found in North America. At all events, Wilson's, and the numerous American specimens that have passed under our examination, were all young Hen-Harriers.

After having stated that the error of considering the Hen-Harrier and Ring-tail as different species had prevailed for years in Europe, it is but just to mention, that Aldrovandi, Brisson, Ray, and others of the older authors, were perfectly in accordance with nature on this point. It was perhaps with Linné, or at least with Buffon, Gmelin, Pennant, and Latham himself, who afterwards corrected it, that the error originated. Latham, confident of his own observations and those of Pennant, who had found *males* of the species said to be the female of the *Falco cyaneus*, (Hen-Harrier) and not reflecting that these males might be the young, exclaims, "authors have never blundered more than in making this bird (the Ring-tail) the same species with the last mentioned (Hen-Harrier);" an opinion that he was afterwards obliged to recant. In physical science we cannot be too cautious in rejecting facts, nor too careful in distinguishing in an author's statement, what has passed under his own eyes, however extraordinary it may seem, from the inference he draws from it. Thus, to apply the principle in this instance, Latham might have reconciled the fact of males and females being found in the plumage of the Ring-tail, with the others, that no females were ever found under the dress of the Hen-Harrier, and that some Ring-tails would gradually change into Hen-Harriers.

Whether or not the Marsh-Hawk of America was the same with the Ring-tail of Europe, Wilson would not take upon himself to pronounce, as he has left to his bird the distinctive name of *Falco uliginosus*; though he positively states, that in his opinion they are but one species, and even rejects as false, and not existing, the only character on which the specific distinction was based, that of the American having "strong, thick, and short legs," instead of having them long and slender. For want of opportunity however of actually comparing specimens from both continents, he could choose no other course than the one he has followed;

and so great appears to have been the deference of ornithologists for this extraordinary man, that while they have unhesitatingly quoted as synonymous with the European Hen-Harrier, the African specimens described by Le Vaillant, and even the various nominal species created or adopted by Vieillot as North American, the *Falco uliginosus* of former authors has been respected, probably as the Marsh-Hawk of Wilson! But the latter is not more than the others entitled to be admitted as distinct, being merely the present in its youthful dress.

The Hen-Harrier belongs to the subgenus *Circus*, which in English we shall call Harrier, the name of Buzzard being appropriated to the *Buteones*. Though perfectly well marked in the typical species, such as this, the group to which our bird belongs passes insensibly into others, but especially into that called *Buteo*, some even of the North American species being intermediate between them. Whenever the groups of Falcons shall be elevated to the rank of genera, it will perhaps be found expedient to unite *Circus* and *Buteo*, as they do not differ much more from each other than our two sections of Hawks; those with long and slender legs, and those with short stout legs, *Astur* and *Sparvius* of authors, the line of demarcation being quite as difficult to be drawn.

The Harriers are distinguished in their tribe by their weak, much compressed bill, destitute of a tooth or sharp process, but with a strongly marked lobe; their short and bristly cere; their long, slender, and scutellated tarsi; their slender toes, of which the outer are connected at base by a membrane; their nails, subequal, weak, channelled beneath, much incurved, and extremely sharp: a very remarkable characteristic is exhibited in their long wings, subequal to the tail, which is large, and even, or slightly rounded at tip: their first quill is very short, always shorter than the fifth, and the third or fourth is the longest. Their slender body and elegant shape chiefly distinguish them from their allies,

the Buzzards. They may be further subdivided into those in which the female at least, is possessed of that curious facial ring of scaly or stiff feathers so remarkable in the Owls, and those entirely destitute of it. One species only is found in the United States, which belongs to the first section, and cannot be confounded with any other than that from which we have thought proper to distinguish it at the beginning of this article. In this section, the female differs essentially from the male, the young being similar to her in colour. The latter change wonderfully as they advance in age, to which circumstance is owing the wanton multiplication that has been made of the species. In those which compose the second section, the changes are most extraordinary, since, while the adult male is of a very uniform light colour, approaching to white, the female and young are very dark, and much spotted and banded: they are also much more conspicuously distinguished by the rigid facial ring.

These birds are bold, and somewhat distinguished for their agility, especially when compared with the Buzzards, and in gracefulness of flight they are hardly inferior to the true Falcons. They do not chase well on the wing, and fly usually at no great height, making frequent circuitous sweeps, rarely flapping their wings, and strike their prey upon the ground. Their food consists of mice, and the young of other quadrupeds, reptiles, fishes, young birds, especially of those that build on the ground, or even adult water birds, seizing them by surprise, and do not disdain insects; for which habits they are ranked among the ignoble birds of prey. Unlike most other large birds of their family, they quarter their victims previously to swallowing them, an operation which they always perform on the ground. Morasses and level districts are their favourite haunts, being generally observed sailing low along the surface, or in the neighbourhood of waters, migrating when they are frozen. They build in marshy places, among high

grass, bushes, or in the low forks or branches of trees; the female laying four or five round eggs, entirely white, or whitish, without spots. During the nuptial season, the males are observed to soar to a considerable height, and remain suspended in the air for a length of time.

The Male Hen-Harrier is eighteen inches long, and forty-one in extent; the bill is blackish horn colour, the cere greenish yellow, almost hidden by the bristles projecting from the base of the bill; the irides are yellow. The head, neck, upper part of the breast, back, scapulars, upper wing-coverts, and middle tail-feathers pale bluish gray, somewhat darker on the scapulars; the upper coverts being pure white, constitute what is called a white rump, though that part is of the colour of the back, but a shade lighter; breast, belly, flanks, thighs, under wing-coverts, and under tail-coverts pure white, without any spot or streak. The wings measure nearly fourteen inches, and when closed, reach only two-thirds the length of the tail, which is eight and a half inches long, extending by more than two inches beyond them; the primaries, of which the first is shorter than the sixth, the second and fifth subequal, and the third and fourth longest, are blackish, paler on the edges, and white at their origin, which is more conspicuous on their inferior surface; the secondaries have more of the white, being chiefly bluish gray on the outer web only, and at the point, which is considerably darker. The tail is but very slightly rounded. All the tail-feathers have white shafts, and are pure white beneath; the middle ones are bluish gray, the lateral almost purely white; somewhat grayish on the outer vane, and obsoletely barred with blackish gray on the inner. The feet are bright yellow, and the claws black; the tarsus is three inches long, and feathered in front for an inch.

The Female is larger, being between twenty and twenty-one inches long, and between forty-four and forty-seven in extent; the

tarsi, wings, and tail, proportionally longer, but strictly corresponding with those of the male. The general colour above is chocolate-brown, more or less varied with yellowish rufous; the space round the orbits is whitish, and the auriculars are brown; the small stiff feathers forming the well marked collar, or ruff, are whitish rusty, blackish brown along the shaft; the feathers of the head and neck are of a darker brown, conspicuously margined with yellowish rusty; on the nucha, for a large space, the plumage is white at the base, as well as on the sides of the feathers, so that a little of that colour appears even without separating them; those of the back and rump are hardly, if at all, skirted with yellowish rusty, but the scapulars and wing-coverts have each four regular large round spots of that colour, of which those farthest from the base lie generally uncovered; the upper tail-coverts are pure white, often, but not always, with a few rusty spots, constituting the so-called white rump, which is a constant mark of the species in all its states of plumage. The throat, breast, belly, vent, and femorals, pale yellowish rusty, streaked lengthwise with large acuminate brown spots darker and larger on the breast, and especially the under wing-coverts, obsolete on the lower parts of the body, which are not spotted. The quills are dark brown, whitish on the inner vane, and transversely banded with blackish; the bands are much more conspicuous on the inferior surface, where the ground-colour is grayish white. The tail is of a bright yellowish rusty, the two middle tail-feathers dark cinereous; all are pure white at the origin, and regularly crossed with four or five broad blackish bands; their tips are more whitish, and the inferior surface of a grayish white, like that of the quills, but very slightly tinged with rusty, the blackish bands appearing to great advantage, except on the outer feathers, where they are obsolete, being less defined even above.

The young male is almost perfectly similar in appearance to

the adult female, (which is not the case in the Ash-coloured Harrier) being however more varied with rusty, and easily distinguished by its smaller size. It is in this state that Wilson has taken the species, his very accurate description being that of a young female. The male retains this plumage until he is two years old, after which he gradually assumes the gray plumage peculiar to the adult: of course they exhibit almost as many gradations as specimens, according to their more or less advanced age. The ash and white appear varied or mingled with rusty; the wings, and especially the tail, exhibiting more or less indications of the bands of the young plumage. The male, when he may be called already adult, varies by still exhibiting the remains of bands on the tail, more or less marked or obliterated by the yellowish edges of the feathers of the back and wings, and especially by retaining on the hind head a space tinged with rusty, with blackish spots. This space is more or less indicated, in the greater part, both of the American and European specimens I have examined. Finally, they are known by retaining traces of the yellowish of the inferior surface in larger or smaller spots, chiefly on the belly, flanks, and under tail-coverts.

For the greater embellishment of the plate, we have chosen to represent one of these very nearly, but not quite adult males, in preference to a perfectly mature bird, which may easily be figured to the mind by destroying every trace of spot or bar. It is moreover, in this dress that the adult is met with in the Middle and Northern states, where it is very rare, and we have never seen a specimen quite mature, though the young are tolerably common; as if the parents sent their children on a tour to finish their education, then to return and marry, and remain contentedly at home. The specimen here figured, was shot on Long Island, and was preserved in Scudder's Museum, New-York.

Its total length is eighteen inches, breadth forty-one; the bill

bluish black; cere, irides, and feet yellow; claws black. The plumage above is bluish ashy, much darker on the scapulars, and with the feather-shafts blackish: beneath white, slightly cream-coloured on the breast; the belly, flanks, and lower tail-coverts, with small arrow-shaped spots of yellowish rusty; the long axillary feathers are crossed with several such spots, taking the appearance of bands: the upper tail-coverts are pure white; the primaries dusky blackish at the point, edged with paler, and somewhat hoary on the outer vane; at base, white internally and beneath. The tail is altogether of a paler ash than the body, tipped with whitish, and with a broad blackish subterminal band; all the tail-feathers are pure white at their origin under the coverts, the lateral being sub-banded with blackish and white on their inner vanes, and the outer on the greater part of the outer web also; the shafts are varied with black and white.

The Hen-Harrier's favourite haunts are rich and extensive plains, and low grounds. Though preferring open and champaign countries, and seeming to have an antipathy to forests, which it always shuns, it does not, like the Ash-coloured Harrier, confine itself to marshes, but is also seen in dry countries, if level. We are informed by Wilson, that it is much esteemed by the southern planters, for the services it renders in preventing the depredations of the Rice-birds upon their crops. Cautious and vigilant, it is not only by the facial disk that this bird approaches the Owls, but also by a habit of chasing in the morning and evening, at twilight, and occasionally at night when the moon shines. Falconers reckon it among the ignoble Hawks. Cruel, though cowardly, it searches every where for victims, but selects them only among weak and helpless objects. It preys on moles, mice, young birds, and is very destructive to game; and does not spare fishes, snakes, insects, or even worms. Its flight is always low,

but notwithstanding, rapid, smooth, and buoyant. It is commonly observed sailing over marshes, or perched on trees near them, whence it pounces suddenly upon its prey. When it has thus struck at an object, if it re-appears quickly from the grass or reeds, it is a proof that it has missed its aim, for, if otherwise, its prey is devoured on the spot.

It breeds in open wastes, frequently in thick furze coverts, among reeds, marshy bushes, the low branches of trees, but generally on the ground. The nest is built of sticks, reeds, straw, leaves, and similar materials heaped together, and is lined with feathers, hair, or other soft substances; it contains from three to six, but generally four or five, pale bluish-white eggs, large and round at each end: the young are born covered with white down, to which succeed small feathers of a rust colour, varied with brown and black. If any one approaches the nest during the period of rearing the young, the parents evince the greatest alarm, hovering around, and expressing their anxiety by repeating the syllables *geg, geg, gag*; or *ge, ge, ne, ge, ge*. Crows manifest a particular hostility to this species, and destroy numbers of their nests.

The Hen-Harrier is widely spread over both continents, perhaps more than any other land bird, though it is no where remarkably numerous. In the northern countries of America, it is a migratory species, extending its wanderings from Florida to Hudson's Bay. It is not known to breed in the Northern, or even in the Middle states, where the adults are but rarely seen. In the Southern parts of the Union, and especially in Florida, they are rather common in all their varieties of plumage. The species is also found in the West Indies, Cayenne, and probably has an extensive range in South America. It is found throughout Britain, Germany, Italy, the north of Africa, and the northern portion of Asia. It is very common in France and the Nether-

BLUE HAWK, OR HEN-HARRIER.

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lands, is found in Russia and Sweden, but does not inhabit the north of Norway, being by no means an Arctic bird. It is again met with in the southern parts of Africa, near the Cape of Good Hope, and is not uncommon all along the eastern coast of that continent. In Switzerland, and other mountainous countries, it is of very rare occurrence.

STELLER'S JAY.

GARRULUS STELLERI.

Plate XIII. Fig. 1.

Corvus stelleri, GMEL. *Syst.* I, p. 370, Sp. 27. LATH. *Ind.* p. 158, Sp. 20. NOB. *Suppl.*
Syn. Birds U. S. Sp. 63, bis, in *Zool. Journ. Lond.* V, p. 2. ID. in *App. Gen. N. A.*
Birds in Ann. Lyc. N. Y. p. 438.

Garrulus coronatus? SWAINSON, *Syn. Birds Mex.* Sp. 67, in *Phil. Mag. N. S.* I, p.
 437, old bird?

Garrulus stelleri, VIEILL. *Nouv. Dict. d'Hist. Nat.* XII, p. 481.

Geai de Steller, DAUD. *Orn.* II, p. 248.

Steller's crow, PENN. *Arct. Zool.* Sp. 139. LATH. *Syn.* I, p. 387, Sp. 21. ID. *2d Suppl.*
 VIII, p. 111, Sp. 8. ID. *Gen. Hist.* III, p. 56, Sp. 58.

Collection of Mr. Leadbeater, in London.

To the enlightened liberality and zeal for science of that distinguished collector, Mr. Leadbeater of London, we, and the American public, are now indebted for the appearance of the first figure ever given of this handsome Jay. Trusting his precious specimens twice to the mercy of the waves, he confided to us this, together with several other still more rare and valuable North American birds, which no consideration would have induced him to part with entirely, to have them drawn, engraved, and published on this side of the Atlantic. It is the frequent exercise of similar disinterestedness in the promotion of scientific objects, that has procured for Mr. Leadbeater the distinction with which he is daily honoured by learned bodies and individuals.

The Steller's Jay is one of those obsolete species alluded to in the preface to this volume. It is mentioned by Pallas as having



Drawn from Nature by A. Rader.

1. Steller's Jay.
Garrulus Stelleri.

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2. Lapland Longspur. 3. Female.
Emberiza Lapponica

Engraved by Alexander Lumsden



been shot by Steller, when Behring's crew landed upon the coast of America. It was first described by Latham from a specimen in Sir Joseph Banks's collection from Nootka Sound, and on his authority has been admitted into all subsequent compilations. The species is indeed too well characterized to be doubted, and appears moreover to have been known to Temminck, as it is cited by him as a true Jay in his "Analysis of a General System." Nevertheless, adhering strictly to our plan of not admitting into the Ornithology of the United States any but such as we had personally examined, we did not include this species either in our Catalogue, or Synopsis, of the birds of this country; and it is but recently that Mr. Leadbeater's specimen has enabled us to add it to our list.

In elevating our subgenus *Garrulus*, to the rank of a genus, we merely conform to the dictates of nature; in this instance coinciding with Temminck, whose intention it is, as he informs us, to include in it the Jays and Magpies, leaving the name of *Corvus* for those species which are distinguished by their black plumage, and short and even tails. These birds are on every account well worthy of this distinction, and we cheerfully adopt an arrangement which we deem consonant with nature: but we cannot agree to the change of termination (*Garrula*) which he has attempted to introduce, under the pretence that his genus is more extensive than the genus *Garrulus* of former authors. That genus was in fact formed by Brisson, and afterwards by Linné, united with *Corvus*. This latter genus of Linné certainly contained within itself the constituents of several very natural genera; but the additions made to it by Gmelin and Latham, rendered it an utter chaos, where every new species with a stout bill took its place, in defiance of the genuine characters. Under such circumstances the task of the Ornithologist who professed to be guided by philosophical principles was, doubtless, not merely to subdivide, but to

make an entire reformation. Illiger, with his usual judgment, perceived the evil and attempted its remedy; but his genus was still too extensive, and besides was not natural, as it included the Wax-wings, a very distinct genus, that had always been forced into others. The only advantage it possessed over that of Latham, was, that all the species it comprised, exhibited its artificial characters. As restricted by Brisson, Vieillot, and lately adopted by Temminck, by whom it was previously much limited, it is perfectly natural; though we cannot help remarking that some even of the eighteen species enumerated by the latter in his article on the generalities of the Crows, in the *Planches Coloriées*, may again be separated, such as *Corvus columbianus*, Wils., which ought perhaps to constitute a genus by itself. Vieillot, and other recent writers on ornithology, have long since adopted the genus *Garrulus* as distinct even from *Pica*, though we prefer retaining the latter merely as a subgenus of *Garrulus*, since it is absolutely impossible to draw the line of separation between them without resorting to minute and complicated distinctions.

The Jays and Magpies in fact require to be distinguished from the Crows, as a genus, on account of their form, colour, habits, and even their osseous structure. Their upper mandible, somewhat inflected at tip, and the navicular shape of the lower, afford obvious characteristic marks. Their wings too are rather short, and do not reach by a considerable space to the tip of the tail, which is long, and more or less rounded, sometimes greatly wedge-shaped. On the contrary, the Crows have long wings, reaching almost or quite to the extremity of the tail, which is short, and even at tip. The identity in the shape of the wings and tail, and even the colours of their plumage, which agree in all the species, and in different climates, render the Crows a very natural and well marked group. The black plumage and offensive odour, which cause them to be viewed every where with disgust, and even

somewhat of superstitious dread, are far from being characteristics of the neat and elegant Jays.

The true *Corvi* are distinguished by the following traits. Bill very stout; feet very strong; general form robust; flight highly sustained, straight, or circular, as if performing evolutions in the air. They live, travel, and breed, in large bands; affect wide plains and cultivated grounds, only retiring to the adjacent forests to roost, and are always seen on high and naked trees, but never on thickets, shrubs, or bushes. Their voice is deep and hoarse. They are more or less fond of cattle, some species preying on the vermin that infest them. Though devouring all kinds of food, yet their propensity is decidedly carnivorous. Their black, unvaried colours, are remarkably opposed to the bright and cheerful vesture of the Jays, whose plumage is of a much looser texture, the feathers being longer and much more downy.

The Jays are again more particularly distinguished from the Magpies by their head-feathers being long and silky, and always erectile, (especially when the bird is excited or angry) even when they are not decidedly crested, as is the case in many species. Their colours are also gayer and more brilliant, with more or less of blue. The species of both these sections are garrulous, noisy, and inquisitive. Together with the Crows, they are eminently distinguished by their stout, cultrate bill, generally covered at base with setaceous, incumbent, porrect feathers, hiding the nostrils. The female is similar to the male in appearance, and the young differ but little, and only during the first year, from the adult. They are very shy, suspicious, possessed of an acute sense of smelling, and evince great sagacity in avoiding snares. They are omnivorous in the fullest extent of the word, feeding on grains, insects, berries, and even flesh and eggs. When they have caught a small bird, which they can only do when feeble and sickly, or ensnared, they place it under their feet, and with

their bill tear it to pieces, swallowing each piece separately. Nevertheless they give the preference to grains or fruits. The northern species are wary and provident, collecting stores of food for the winter. They are very petulant; their motions quick and abrupt, and their sensations lively. When alarmed by the appearance of a dog, fox, or other living or dead object, they rally together by a peculiar note, as if they would impose upon it by their numbers and disagreeable noise. When on the ground, they display great activity; or if on trees, they are continually leaping about from branch to branch, and hardly ever alight on dead or naked ones. They are generally met with in forests, seldom in open plains; their favourite resort is among the closest and thickest woods. Less suspicious and cunning than the Crows, or even the Magpies, they may be decoyed into snares and taken in great numbers, especially by imitating the voice of one of their own species in difficulties, or by forcing a captive individual to cry. They live in families, or by pairs, the greater portion of the year; and though considerable numbers may be seen travelling at once, they always keep at intervals from each other, and never in close flocks like the Crows. They are easily tamed, and are susceptible of attachment; learn readily to articulate words, and imitate the cries of different animals. They have a troublesome propensity to purloin and conceal small objects not useful to themselves, and as jewels and precious metals are peculiarly apt to attract their notice, they have been the cause, when kept as pets, of serious mischief. Every one is familiar with the story of the Thieving Magpie, become so celebrated by the music of Rossini, and which is founded on fact.

The Jays breed in woods, forests, orchards, preferring old and very shaded trees, placing their nest in the centre against the body, or at the bifurcation of large limbs. The nest is built without art, and is formed of twigs and roots, whose capillary

fibres serve as a lining inside: the eggs are from four to six. The old ones keep the food for their young in the œsophagus, whence they can bring it up when wanted. The young are born naked, and remain for a long period in the nest, being still fed for some time by the parents after they are full fledged.

Unlike the melancholy Crows, which step gravely, lifting one foot after the other, the Jays and Magpies move about nimbly by hopping, and are constantly in motion while on the ground. Their flight is moreover neither protracted nor elevated, but merely from tree to tree, and from branch to branch, shooting straight forward at once when wishing to go any distance, now and then flapping their wings, and hovering as they descend, when about to alight. It is quite the reverse with the Crows; and all these characters are of the greatest importance in the establishment of natural groups.

While the true *Corvi*, by their stout and almost hooked bill, and the carnivorous habits of some species, exhibit on the one hand the gradual passage from the Vultures, and on the other, by the slender-billed species, the transition to the Crow-blackbirds and Troopials; the affinities of the Jays present nice gradations to the genera already dismembered from *Corvus*, such as *Nucifraga*, *Pyrrhocorax*, *Bombycilla*, and at the same time form other links with *Lanius*, and even with *Turdus* and *Acridotheres*.

There is one remarkable analogy of the Jays which we cannot pass over in silence. It is, however singular, and hitherto unsuspected, with the Titmouse, (*Parus*). Form, habits, even the peculiar looseness of texture of the plumage, all are similar in these genera, hitherto estimated so widely different. This resemblance extends even to colour in some species; it might even be asked, what else in fact is the Canada Jay than a large Titmouse, and what the Crested Titmouse, but a small Jay? The blue colour of the typical Jays predominates moreover in other

Pari, and the *P. caudatus* of Europe has also the long, cuneiform tail of some, no less than *P. bicolor* their crest.

The genus *Garrulus* has an extensive geographical range, being found in all latitudes and longitudes. It is composed of about thirty species, nearly half of which may more properly be called Jays: of the latter there are but two in Europe, and though we have doubled the number given by Wilson, we think that others will yet be discovered in the wild western tracts of this continent. There exist imperfect accounts of two or three species inhabiting the countries near the Rocky Mountains, one of which is probably that here described, and others may prove to be some of the newly discovered Mexican species, one of which, the *Garrula gubernatrix* of Temminck, is so proudly beautiful.

The Steller's Jay is more than twelve inches long. The bill measures one inch and a half, is entire, and totally black; the bristly feathers over the nostrils are also wholly black. The feathers of the head are greatly elongated, forming a large crest, more than two and a half inches long, and, with the whole head and neck, entirely deep brownish black, grayish on the throat; the feathers each side of the front are slightly tipped with bright and light azure, thus forming a dozen or more of small dots on that part; on the neck the brown becomes lighter, and extends down on the back, occupying the scapulars as well as the inner wing-coverts; on the middle of the back the brown becomes somewhat tinged with bluish, and blends gradually into a fine bright blue colour, covering the rump and the upper tail-coverts: all the inferior parts from the neck, at the lower part of which the dusky colour passes into blue, are blue somewhat tinged with gray, which is the general colour of the base of the plumage. The wings are nearly six inches in length; the fourth, fifth, and sixth primaries being subequal and longest. All the outer wing-coverts and the secondaries are blue, faintly crossed with obsolete

blackish lines; the under wing-coverts are dusky; the primaries are dark dusky, and, with the exception of the outer ones, at tip are edged or tinged with blue; on the inner vane the secondaries are blackish, but on the outer they are deep glossy blue. The tail is five inches and a half long, and but slightly rounded; it is of a deep glossy azure blue, more brilliant on the outer vanes of the feathers, the inner being slightly tinged with dusky; an indication of obliterated, transverse, blackish lines, may be perceived in certain lights on almost all the tail-feathers in our specimen, and we have no doubt that on others they are more marked; the shafts both of the quills and tail-feathers are black. The tarsus is an inch and three quarters long; the femorals blackish, slightly mixed with bluish at the joint; the feet and nails are entirely black.

This description is taken from the individual represented in the plate, which was killed near the Oregon, or Columbia river. Another specimen, from Mexico, also in Mr. Leadbeater's collection, exhibited greater brilliancy of plumage, being principally distinguished, as nearly as our recollection serves, by the black colour of the anterior parts being less extended, and by having more of silvery bluish (indicated in our bird) on the front, extending to the throat and eye-brows, and somewhat round the head. This, without any hesitation, we considered as a more perfect specimen, a mere variety of age, and would have had our figure made from it: but having been informed that an English ornithologist (his name and that of the species were not mentioned, or if they were, we have forgotten them) considered it as a new Mexican species, we have preferred, notwithstanding our conviction, strictly copying the less brilliant specimen procured in the United States territory, to the more beautiful one from Mexico. The appearance of *Garrulus coronatus* of Mr. Swainson, in the Synopsis before quoted, reminded us of the circumstance, and we

have therefore quoted it with doubt. Our two birds agree perfectly in markings and dimensions. Of the habits of the Steller's Jay, little or nothing is known. It inhabits the western territory of the United States, beyond the Rocky Mountains, extending along the western coasts of North America, at least from California to Nootka Sound; is common on the Oregon, and found also in Mexico, on the table land, and in Central America.

It is a curious fact in ornithological geography, that of the four Jays now admitted into the Fauna of the United States, while the common Blue Jay, the only eastern representative of the genus, spreads widely throughout the continent, the three others should be confined in their range, each to a particular section of country. Thus the Canada Jay is the northern, the Florida Jay is the southern, and the present the western representative of the genus. It is probable that another species at least, our *Garrulus ultramarinus*, from Mexico, will soon be admitted as the central Jay. To the latter bird, Mr. Swainson, who had probably not seen my paper describing it, (published more than two years ago in the Journal of the Academy of Natural Sciences) gives the name of *G. sordidus*; at least judging from his short phrase, and the dimensions and locality, they are the same.

LAPLAND LONGSPUR.

EMBERIZA LAPPONICA.

Plate XIII. Fig. 1, Male; 2, Female.

- Fringilla lapponica*, LINN. *Syst.* I, p. 317, Sp. 1. *Faun. Suec.* Sp. 235. GMEL. *Syst.* I, p. 900, Sp. 1. RETZ. *Faun. Suec.* p. 242, Sp. 119. FORST. *Ph. Tr.* LXII, p. 404. FABR. *Faun. Grænl.* p. 119, Sp. 8. LATH. *Ind.* p. 440, Sp. 18. UBERS, I, p. 289, Sp. 18.
- Fringilla montana*, BRISS. *Orn.* III, p. 160, Sp. 38. KLEIN, *Av.* p. 92, Sp. 10.
- Fringilla calcarata*, PALLAS, *It.* p. 710, Sp. 20, t. E. ID. in *4to. French transl.* III, Pl. 1. MEYER & WOLF, *Tasch. Deutschl.* I, p. 176, Sp. 13.
- Emberiza lapponica*, NILSSON, *Orn. Suec.* I, p. 157, Sp. 76. RANZ. *El. Zool.* VI, p. 24.
- Emberiza calcarata*, TEMM. *Man. Orn.* I, p. 322. BREHM, *Lehrb. Eur. Vog.* I, p. 221. RICHARDSON, *App. to Parry's 2d Voy.* p. 345.
- Passerina lapponica*, VIEILL. *Nouv. Dict. Hist. Nat.* XXV, p. 12.
- Plectrophanes calcaratus*, MEYER, *Tasch.* III, p. 176, Sp. 13.
- Plectrophanes lapponica*, SELBY in *Trans. Linn. Soc.* XV, p. 156, Pl. 1, young.
- Montifringilla congener*, ALDROV. *Orn.* II, p. 821, Pl. 823.
- Le Grand Montain*, BUFF. *Ois.* IV, p. 134.
- Le Pinson de Montagne*, GERARDIN, *Tabl. Elem. d'Orn.* I, p. 186.
- Lerchen Finck*, BECHST. *Naturg. Deutsch.* III, p. 246, Sp. 16. NAUM. *Nachtr.* III, p. 25, Pl. 20, B female, Pl. 40, male in autumn.
- Greater Brambling*, ALB. III, p. 59, Pl. 63.
- Lapland Finch*, PENN. *Arct. Zool.* II, Sp. 259. LATH. *Syn.* IV, p. 263, Sp. 14. UBERS, III, p. 256, Sp. 14.

My Collection.

THIS species, long since known to inhabit the desolate Arctic regions of both continents, is now for the first time introduced into the Fauna of the United States; having been omitted both in our Synopsis and Catalogue. It is entitled to be ranked among the birds of this country, from the fact, that a few stragglers out

of the numerous bands which descend in winter to comparatively warm latitudes, show themselves almost every year in the higher, unsettled parts of Maine, Michigan, and the North-Western territory. Even larger flocks are known not unfrequently to enter the territory of the Union; where, contrary to what is generally supposed, they are observed to alight on trees, as well as on the ground, notwithstanding their long and straight hind nail. We think it highly probable that some individuals, especially in their youth, visit in cold winters the mountainous districts of the Middle states; as they are well known in Europe to wander or stray to the more temperate climates of Germany, France, England, and especially Switzerland; in all which countries, however, the old birds are never seen. It is not extraordinary that they should never have been observed in the Atlantic states, as they are nowhere found in maritime countries.

No figure of the adult male in perfect plumage, has before now, we believe, been given; and no representation at all is to be met with in the more generally accessible books, or collections of plates. Mr. Selby has lately published a figure of the young in the Linnean Transactions, and it will also, we presume, appear in his splendid work, which yields to none but Naumann's, Wolf's, and Wilson's, in point of accuracy and character. That recorded by him appears to be the first instance of an individual having been found in Britain. The species is common in the hilly districts of eastern Europe, but is chiefly confined within the Polar circle, though found abundantly in all the northern mountainous districts of Europe and Asia, particularly Siberia and Lapland. It is sometimes known to descend in autumn and winter, and, though very rarely, in spring, either singly and astray, or in immense clouds, into the north and middle of Germany. Great numbers were seen in the neighbourhood of Frankfort on the Main, in the middle of November, 1821. In France they are restricted to the

loftiest and most inaccessible mountains, where they are very rare, so much so, that in those of the Vosges, Gerardin only met with a single specimen after six years' researches; though more frequent in the mountains of Dauphiné. They are common during summer in Arctic America; and are found at Hudson's Bay, in winter, not appearing before November: near the Severn river they haunt the cedar-trees, upon whose berries they feed exclusively. These birds live in large flocks, and are of so social a disposition, that when separated from their own species, or when in small parties, they always join company with the common Lark of Europe; or in America, with some of the different Snow-birds. They feed chiefly on seeds, especially of the dwarf willows growing in frozen and mountainous countries, but occasionally also on leaves, grass, and insects. They breed on small hillocks, in open marshy fields; the nest is loosely constructed with moss and grasses, lined with a few feathers. The female lays five or six oblong eggs, yellowish rusty, somewhat clouded with brown. The Lapland Longspur, like the Larks, never sings but suspended aloft in the air, at which time it utters a few agreeable and melodious notes.

As may be seen by the synonyms at the head of this article, this bird has been condemned by nomenclators to fluctuate between different genera. But between *Fringilla* and *Emberiza* it is not difficult to decide, as it possesses all the characters of the latter in an eminent degree, even more so than its near relative the Snow-Bunting, which has never been misplaced. It has even the palatine knob of *Emberiza*, and much more distinctly marked than in the Snow-Bunting, (*Emberiza nivalis*). It has been erroneously placed in *Fringilla*, merely on account of its bill being somewhat wider and more conic.

Meyer has lately proposed for the two just mentioned nearly allied species, a new genus under the name *Plectrophanes*, (corresponding to the English name we have used): this we have

adopted as a subgenus, and are almost inclined to admit as an independent genus, being well characterized both by form and habits. The two species of *Plectrophanes*, to which we apply the name of Longspur, together with the Buntings, are well distinguished from the Finches by their upper mandible, contracted and narrower than the lower, their palatine tubercle, &c. From the typical *Emberizæ* they differ remarkably by the length and straightness of their hind nail, and the form of their wings, which, owing to the first and second primaries being longest, are acute. In the true Buntings, the first quill is shorter than the second and third, which are longest. This species, in all its changeable dresses, may at once be known by its straight and very long hind nail, which is twice as long as the toe. The bill is also stronger and longer than in the other species.

The Longspurs are strictly Arctic birds, only descending in the most severe and snowy winters to less rigorous climates, and never to the temperate zone, except on the mountains. Hence they may with the greatest propriety be called Snow-birds. They frequent open countries, plains, and desert regions, never inhabiting forests. They run swiftly, advancing by successive steps like the Larks, (which they resemble in habits, as well as in the form of their hind nail) and not by hopping, like the Buntings. The conformation of their wings also gives them superior powers of flight to their allied genera, the Buntings and Finches. Their moult appears to be double, and notwithstanding Temminck's and my own statement to the contrary, they differ much in their summer and winter plumage. Owing to this, the species have been thoughtlessly multiplied: there are in reality but two, the present, and Snow-Bunting of Wilson.

The Male Lapland Longspur in full breeding dress, is nearly seven inches long, and twelve and a quarter in extent; the bill is nearly half an inch long, yellow, blackish at the point; the irides

are hazel, and the feet dusky. The head is thickly furnished with feathers. The forepart of the neck, throat, and the breast, are glossy black; the hind-head is of a fine reddish rusty; a white line arises from the base of the bill to the eye, behind which it becomes wider, descending on the sides of the neck somewhat round the breast; the belly and vent are white; the flanks posteriorly with long blackish streaks. The back and scapulars are brownish black, the feathers being skirted with rusty; the smaller wing-coverts are blackish, margined with white, the greater coverts margined with rufous, and white at tip, forming two white bands across the wings: the primaries are blackish, edged with white; secondaries emarginated at tip, dusky, edged with rusty: the wings when closed reach to three-fourths the tail. The tail is two and a half inches in length, rather forked, and of a blackish colour; the outer feather on each side with a white cuneiform spot; and the outer web almost entirely white; the second with a white cuneiform spot only. The hind nail is almost an inch long.

The adult female is somewhat smaller than the male. In spring she has the top of the head, the shoulders, back, and wing-coverts brownish black, the feathers being edged with rusty; the sides of the head blackish intermixed with rusty; over the eyebrows a whitish line, as in the male, tinged with rusty; the nucha and rump are brownish rusty, with small black spots; the throat is white, encircled with brown; remaining inferior parts white: wings and tail as in the other sex.

The male in autumn and winter has the bill brownish yellow; irides and feet brownish. Head black, varied with small spots of rusty, auriculars partly encircled with black feathers; throat yellowish white, finely streaked with deep black. Fore-neck and breast black, mixed with grayish white; the line passing through the eye down the breast yellowish white, becoming darker on the breast; lower surface from the breast white, spotted on the flanks.

Wings deep blackish chesnut, crossed by two white lines; primaries on the inside at tip margined with white. Tail forked, brownish black, all the feathers margined with rusty, the two outer with a white cuneiform spot at tip.

The dress of the female in autumn and winter is as follows: head, and neck above, shoulders and back, grayish rusty, with blackish spots, the rusty predominating on the neck and rump; the superciliar line whitish rusty, uniting with a white streak from the angle of the bill: throat white each side, with a brownish line; upper part of the breast grayish, spotted with black; inferior parts white; the flanks with longitudinal blackish marks.

The young of both sexes, during the first year, are of a yellowish brown above, tinged with grayish, streaked and spotted with blackish, the shafts of the feathers being of that colour; the cheeks and auriculars are brownish, the latter mixed with black, a small blackish spot, that spreads as the bird advances in age, is already visible near the opening of the ears; above the eye is a broad streak of pale brownish; the throat is yellowish white, slightly streaked with brown, and with a blackish line each side coming from the corner of the lower mandible; the lower portion of the neck and breast is of a dingy, reddish white, more intense, and thickly spotted with blackish brown on the breast and flanks; the belly and vent are almost pure whitish. The wing-coverts and secondaries are blackish brown, margined with dark rusty, and tipped with white: the primaries are dusky brown, paler at the edge. The tail-feathers are dusky, and also margined with deep rusty; the outer bearing a reddish white conic spot, which is merely longitudinal, and narrow, on the next. The bill is entirely of a dirty yellowish brown; the feet are dusky brown: the hind nail, though still longer than its toe, is much shorter, and not quite so straight.

The figures represent an old male, and a young female.





Drawn from Nature by A. Miller.

Engraved by Alexander Lanson.

1. Florida Jay.

Garrulus Floridae.

2. Northern Three-toed Woodpecker.

Picus Tridactylus.

3. Young Red-headed Woodpecker.

Picus Erythrocephalus.

FLORIDA JAY.

GARRULUS FLORIDANUS.

Plate XIV. Fig. 1.

Garrulus cyaneus, VIEILL. *Nouv. Dict. d'Hist. Nat.* XII, p. 476.*Garrulus coerulescens*, VIEILL. *Nouv. Dict. d'Hist. Nat.* XII, p. 480.*Garrulus coerulescens*, ORD, in *Journ. Ac. Nat. Sc. Phila.* I, p. 346.*Corvus floridanus*, NOB. *Syn. Am. Birds*, Sp. 64, in *Ann. Lyc. N. Y. Id. Cat. Birds*
U. S. Sp. 64, in *Contr. Macl. Lyc. Phil.**Corvus floridanus*, *Pica glandaria minor*, the little Jay of Florida, BART. *Tr.* p. 290.*Pica glandaria coerulea non cristata*, BART. *Trav.* p. 172.*Le Geay azurin*, and *Le Geay gris-bleu*, VIEILL. *Nouv. Dict. l. c.**Philadelphia Museum*, No. 1378, Male; 1379, Female.*My Collection.*

A SINGLE glance at the plate on which this fine bird is represented, and at that of the preceding, or Steller's Jay, will suffice better than the longest description, to show the error committed by Latham, in quoting in his recent work, (General History of Birds) the name of this species among the synonyms of that dedicated to Steller. In fact, the large crest of that species, (of which the present is altogether destitute) and its black head; the light brown back, and bluish collar of this—but it is needless to carry the comparison between them any further, they are too dissimilar to suffer it, and we shall reserve pointing out differences until required by closely related species, of which more striking examples will not long be wanting.

Mistakes of this kind are perhaps unavoidable in a compilation of such extent as the work we have mentioned, and if they

proceeded from a laudable desire of excluding nominal species, evinced throughout, we should refrain from censure; but when, on the contrary, we find in the same work such repeated instances of an inconsiderate multiplication of species, they cannot be too severely condemned.

Vieillot, in the case of this bird, has fallen into the contrary, and much more common error, of making two species out of it; one from personal observation, and the other by compilation. This mistake has already been corrected by Mr. Ord, in a valuable paper which he drew up on his return from Florida, where he enjoyed the advantage of studying this species in its native haunts.

"When we first entered East Florida," says Mr. Ord, "which was in the beginning of February, we saw none of these birds; and the first that we noticed were in the vicinity of St. Augustine, on the thirteenth of the above mentioned month. We afterwards observed them daily in the thickets near the mouth of the St. Juan. Hence we conjectured that the species is partially migratory. Their voice is not so agreeable as that of the *Garrulus cristatus*, or Crested Blue Jay of the United States; they are quarrelsome, active, and noisy; and construct their nests in thickets. Their eggs I have not seen." "The Blue Jay, which is so conspicuous an ornament to the groves and forests of the United States, is also common in Florida. This beautiful and sprightly bird we observed daily, in company with the Mockingbird and the Cardinal Grosbeak, around the rude habitations of the disheartened inhabitants, as if willing to console them amid those privations which the frequent Indian wars, and the various revolutions which their province has experienced, have compelled them to bear." The Florida Jay, however, is a resident in that country, or only removes from section to section. It is not confined to Florida, where it was first noticed by Bartram, being

found also in Louisiana, and in the West extends northward to Kentucky; but along the Atlantic, not so far. In East Florida it is more abundant, being found at all seasons in low thick covers, clumps, or bushes. They are most easily discovered in the morning about sun-rise on the tops of young live-oaks, in the close thickets of which they are found in numbers. Their notes are greatly varied, and in sound have much resemblance to those of the Thrush and the Blue Jay, partaking a little of both: later in the day it is more difficult to find them, as they are more silent, and not so much on the tree-tops as among the bushes, which are too thickly interwoven with briars and saw-palmettos to be traversed; and unless the birds are killed on the spot, which they seldom are when struck with fine shot, it is next to impossible to come at them in such situations. This species, like its relatives, is omnivorous, but being inferior in strength, does not attack large animals. The stomachs of our specimens contained small fragments of shells, sand, and half-digested seeds.

The Blue Jays, though also found in the same localities, are not so numerous: they keep more in the woods, and their note is louder.

The Florida Jay is eleven and a half inches long, and nearly fourteen in extent; the bill is one inch and a quarter long, hardly notched, and of a black colour, lighter at tip; the incumbent setaceous feathers of the base are grayish blue, mixed with a few blackish bristles; the irides are hazel brown; the head and neck above, and on the sides, together with the wings and tail, are bright azure; the front, and a line over the eye, bluish white; the lores and cheeks of a duller blue, somewhat mixed with black; the back is yellowish brown, somewhat mixed with blue on the rump, the upper tail-coverts being bright azure; the inner vanes and tips of the quills are dusky, their shafts, as

well as those of the tail-feathers, being black. All the lower parts are of a dirty pale yellowish gray, more intense on the belly, and paler on the throat, which is faintly streaked with cinereous, owing to the base of the plumage appearing from underneath, its feathers having blackish, bristly shafts, some of them without webs. From the cheeks and sides of the neck, the blue colour passes down along the breast, and forms a somewhat obscure collar; the under wing, and under tail-coverts are strongly tinged with blue, which colour is also slightly apparent on the femorals; the inferior surface of the wings and tail is dark silvery gray; the base of the plumage is plumbeous ash, blackish on the head: the wings are four and a half inches long, and reach, when closed, hardly beyond the coverts of the tail, which is five and a half inches long, extending beyond the wings three and a half; the spurious feather is extremely short; the first primary, (often mistaken for the second) is as short as the secondaries; the five succeeding are subequal, the third and fourth being rather the longest. The tail is somewhat wedge-shaped, the outer feather being half an inch shorter than the next, and one inch and a half shorter than the middle one. The tarsus is an inch and a quarter long, and black, as well as the toes and nails.

The female is perfectly similar to the male, being but a trifle less in size, and quite as brilliant in plumage.

Two years since it fell to our lot to describe, and apply the name of Ultramarine Jay, (*Garrulus ultramarinus*) to a species found in Mexico, closely resembling this, and to which Mr. Swainson, in his Synopsis of Mexican Birds, has lately given the name of *Garrulus sordidus*, his specimen being probably a young one. The principal distinctive characters may be found in its larger dimensions, but especially in the shape of its tail, which is perfectly even, and not in the least cuneiform, as it generally is

in the Jays. The back, though it is also somewhat intermixed with dusky, is much more blue than in our species, and indeed the whole azure colour is somewhat more brilliant and silky; the bluish collar is wanting, and the under wing, but especially the under tail-coverts, are much less tinged with blue. The wings, moreover, are proportionally larger.

NORTHERN THREE-TOED WOODPECKER.

PICUS TRIDACTYLUS.

Plate XIV. Fig. 2.

Picus tridactylus, LINN. *Syst.* I, p. 177, Sp. 21. GMEL. *Syst.* I, p. 439, Sp. 21. *Faun. Suec.* Sp. 103. *Act. Holm.* 1740, p. 222. *Phil. Trans.* LXII, p. 388. SCOP. *Ann.* I, Sp. 56. GEORGI, *Reise*, p. 165. BOROWSK, *Nat.* II, p. 138, Sp. 8. LATH. *Ind.* p. 243, Sp. 56. MEYER & WOLF, *Tasch. Deutsch. Vog.* I, p. 125, Sp. 8. TEMM. *Man. Orn.* I, p. 401, young. BREHM, *Lehr. Eur. Vog.* I, p. 142. RANZ. *Elem. Orn.* II, p. 184, Sp. 9, Tab. 7, Fig. 4.

Picus hirsutus, VIEILL. *Ois. Am. Sept.* II, p. 68, Pl. 124, adult male.

Picoides, LACEPEDE.

Dendrocopos tridactylus, KOCH, *Baierische Zool.*

Tridactylia hirsuta, STEPHENS, in *Shaw's Zool.* IX, p. 219.

Picus tridactylus anomalus, MUS. PETR. 368.

Picchio a tre dita, STOR. *degli Ucc.* II, Pl. 180.

Pic tridactyle, ou Picoide, TEMM. *l. c.*

Dreizehiger Specht, BECHST. *Nat. Deutschl.* II, p. 1044. NAUM. *Vog. Nachtr.* Pl. 41, Fig. 81. MEYER & WOLF, *Ois. d'Allem. Cah.* 26, Pl. 4, male; Pl. 6, female.

Northern Three-toed Woodpecker, EDWARDS, Pl. 114, male.

Three-toed Woodpecker, PENN. *Arct. Zool.* Sp. 168. LATH. *Syn.* II, p. 600, Sp. 51. *Id. Suppl.* p. 112.

Philadelphia Museum, Male.

My Collection, Male, Female, and young.

THIS species is one of those, which from their habitation being in the extreme north, have a wide range round the globe. It is in fact met with throughout northern Asia and Europe, from Kamtschatka to the most eastern coasts of the old continent; and in America, is very common at Hudson's Bay, Severn River,

Fort William on Lake Superior, and throughout the north-west, in hilly and wooded tracts. In the United States it is only a rare and occasional winter visitant, never having been received by us except from the northern territory of the state of Maine. The species, contrary to what is observed of most other Arctic birds, does not appear to extend so far south comparatively as in Europe, though it is not improbable that on this continent it may also inhabit some unexplored mountainous districts, resembling the wild regions where only it is found in Europe. In both continents, the species affects deep forests among mountains, the hilly countries of northern Asia and Europe, and the very lofty chains of central Europe, whose elevation compensates for their more southern latitude. It is exceedingly common in Siberia, is abundant in Norway, Lapland, and Dalecarlia, among the gorges of Switzerland and the Tyrol, especially in forests of pines. It is not uncommon in the canton of Berne, in the forests near Interlaken, though very rare in Germany and the more temperate parts of Europe. It is well known even to breed in Switzerland, and deposits, in holes formed in pine-trees, four or five eggs of a brilliant whiteness; its voice and habits are precisely the same as those of the spotted Woodpeckers. Its food consists of insects and their larvæ and eggs, and sometimes seeds and berries. It is easily decoyed by imitating its voice.

This species is eminently distinguished among the North American and European Woodpeckers, by having only three toes, the inner hind toe being wanting; besides which it has other striking peculiarities, its bill being remarkably broad, and flattened, and its tarsi covered with feathers half their length: the tongue is moreover not cylindrical, but flat and serrated at the point, which conformation we have however observed in the three European spotted Woodpeckers, and in the American *Picus varius*, *villosus*, *pubescens*, and *querulus*. In all these species

the tongue is flat, with the margins projecting each side and serrated backwards, plain above, convex beneath, and acute at the tip.

Linné, Brisson, and other anterior writers, confounded this northern bird with a tropical species, the Southern Three-toed Woodpecker, *Picus undulatus* of Vieillot, which inhabits Guiana, and, though very rarely, Central America, but never so far north as the United States. It is the southern species of which Brisson has given us the description, while Linné described the present. It is nevertheless probable that he had the other in view, when he observes that in European specimens the crown was yellow, and in the American, red, though, as he states, from Hudson's Bay. The latter mistake was corrected by Latham, who however continued to consider the southern as no more than a variety, in which he was mistaken, since they are widely distinct; but as he had no opportunity of seeing specimens he is not to be censured, especially as he directed the attention of naturalists to the subject. The merit of firmly establishing the two species, is, we believe, due to Vieillot. Besides several other traits, the northern bird is always to be distinguished in every state of plumage from its southern analogue, by that curious character whence Vieillot took his highly characteristic name, (*Picus hirsutus*, *Pic à pieds vêtus*) the feathered tarsi, a peculiarity which this alone possesses to the same extent. The plumage is an uniform black above in the adult, with the top of the head yellow in the male; while the southern, whose tarsi are naked, is black undulated with white, the male having the sinciput red. It is worthy of remark, that the three-toed group, found in Arctic, and in tropical America, should have no representative in the intermediate countries.

Although these are the only three-toed Woodpeckers noted as such in the books, several others are known to exist, some of which, long since discovered, have through inadvertence, or want

of proper discrimination, been placed among the four-toed species. The three-toed Woodpeckers have been formed into a separate genus, a distinction to which they might indeed be considered entitled, if they all possessed the other characters of the present; but besides that this character appears to be insulated, and of secondary importance, (since all forms of the bill known among the four-toed species, are met with among the three-toed, which ought therefore to make as many groups as there are forms, instead of a single one) the naturalist is perplexed by the anomalous species that inhabit India, of which one has only a stump destitute of nail, and another merely a very small nail without the toe; and as if nature took delight in such slow and gradual transitions, two others furnished with both toe and nail, have the toe exceedingly short, and the nail extremely small! This serves to demonstrate that *Picus*, like other natural groups, admits of subdivision. These however ought not to be separations; and the genus has been left comparatively untouched by the great innovators of our day, who have only established three genera from it. The first of these, *Colaptes*, of which *P. auratus* of North America may be considered the type, comprises the species that have four toes, and slightly curved bills, forming the passage to *Cuculus*; another, for which the name of *Picus* is retained, includes the four-toed species with straight bills, and the third for the three-toed species indiscriminately. The only foreign three-toed species in our collection, the beautiful *Picus bengalensis* of authors, (*Picus tiga* of Horsfield) widely spread through tropical Asia and the adjacent islands, and, though long since known, always ranked as four-toed, has the bill precisely similar to the four-toed species, being even remarkably compressed, and very sharp on the ridge.

The Male Northern Three-toed Woodpecker is ten inches long, and sixteen in extent; the bill measures one inch and a

quarter, is of a blackish lead-colour, bluish white at the base of the lower mandible; it is very broad at base, cuneiform and obtuse at tip, and much depressed throughout, the ridge being very much flattened: both mandibles are perfectly straight; the upper pentagonal, the lower obtusely trigonal; the tongue is somewhat shorter than that of other species of the genus; the bristly feathers at the base of the bill are very thick and long, a provision which nature has made for most Arctic birds; in this they measure half an inch, and are blackish, white at base, somewhat mixed with reddish white; the irides are bluish black; the whole head and neck above and on the sides, back, rump, scapulars, smaller wing and tail-coverts, constituting the whole upper surface of the bird, of an uniform, deep, glossy black, changing somewhat to green and purple, according to the incidence of light; the feathers of the front are tipped with white, producing elegant dots of that colour, (which perhaps disappear with age); the crown of the head is ornamented with a beautiful oblong spot one inch in length, and more than half an inch broad, of a bright silky golden yellow, faintly tinged with orange, and the feathers in this place very fine, and somewhat rigid; they are black at their base, and marked with white at the limits of the two colours; the base of the plumage elsewhere is uniformly plumbeous ash: each side from the corner of the mouth, arises a broad white line, forming a white space before the eye, prolonged on the neck; beneath this there is a black one, which passing from the base of the lower mandible, joins the mass of black of the body; a tuft of setaceous white feathers advances far upon the bill beneath; the throat, breast, middle of the belly, and tips of the under tail-coverts are pure white; the sides of the breast, flanks broadly, and base of the tail-coverts, and even of some of the belly feathers, are thickly waved with lines of black and white, as well as the femoral and short tarsal

feathers: in very old birds, as the one represented in the plate, these parts are considerably less undulated, being of a much purer white; the wings are five inches long, reaching two-thirds the length of the tail; the spurious feather is exceedingly short, the first primary hardly longer than the seventh; and the four following subequal and longest; the smaller wing-coverts, as mentioned, glossy black: all the other upper coverts, as well as the quills, are of a dull black, the primaries being somewhat duller; these are regularly marked on both webs with square white spots, larger on the inner webs, and as they approach the base; the secondaries are merely spotted on the inner vane, the spots taking the appearance of bands; the tips of all the quills are unspotted, the lower wing-coverts are waved with black and white, similar to the flanks; the tail is four inches long, of the shape usual in the Woodpeckers, and composed of twelve feathers, of which the four middle, longest, and very robust and acute, are plain deep black, the next on each side is also very acute, and black at base, cream white at the point, obliquely and irregularly tipped with black; the two next to these are cream white to the tip, banded with black on the inner vane at base, the more exterior being much purer white and somewhat rounded; the exterior of all is very short and rounded, and banded throughout with black and pure white: the tarsus is seven-eighths of an inch long, feathered in front for nearly half its length, and, with the toes and nails, dark plumbeous; the nails are much curved, and acute, the hind one being the largest.

The above is a minute description of our finest male specimen, with which all those we have examined coincide more or less. By comparing, however, this description with the detailed ones found in some works, we must conclude that the species is subject to variations in size and plumage, which according to the erroneous impression given by authors, could not be satisfactorily accounted

for by difference of sex, age, or locality: thus, in some specimens the cervix is described white, or partly whitish, instead of being wholly black: the back is also said to be waved with white; which is indeed the case, and with the cervix also, but only in young birds. There is a circumstance however that could not be explained by supposing a difference of age, for while some specimens are seen with no appearance of white or yellow on the crown, but having that part as well as the body, rich shining black, others with a good deal of lemon yellow on that part, are of a duller black, much varied with white. As in other doubtful and intricate cases, these obscurities are dissipated by a close inspection and unprejudiced observation of nature, and we feel much gratification in being enabled to unveil to ornithologists the mystery of these diversities of plumage in this species, by merely pointing out the sexual differences, as well as those originating in the gradual change from youth to maturity in both sexes; which when understood, will not be found more extraordinary than in other species.

The adult Female has never been recognised by any author, nor, hitherto, even by ourselves, having been misled by others in taking the young for her; and this we have only discovered by inspecting a great many specimens. She is precisely similar to the male, even in the minutest particulars, excepting the absence of yellow on the head, this part being of a rich and glossy black.

The young of both sexes are of a dull blackish; the setaceous feathers of the nostrils are grayish, somewhat tinged with rusty; all the feathers of the crown are tipped with white, constituting thick dots on that part, to which they give a silvery appearance; the cheek-bands are obscure and much narrower; the cervix is more or less varied with white, and the feathers of the back being banded with white, gives to that part a waved appearance; the under parts are more thickly waved with black: six, instead

NORTHERN THREE-TOED WOODPECKER. 71

of four, of the middle tail-feathers are almost wholly black, the outer of the six having only two or three whitish spots on the outer web. The remaining parts, with due allowance, are similar to the adult.

The young male gradually assumes the yellow, which is at first but little extended, and of a pale lemon colour, through which are yet for some time seen the white dots attributed to the female. She indeed has them very conspicuous in youth, as they are not confounded with any yellow, but loses them entirely as she advances to the adult state.

YOUNG RED-HEADED WOODPECKER.

PICUS ERYTHROCEPHALUS.

Plate XIV. Fig. 3.

See WILSON'S *American Ornithology*, Vol. I, p. 142, Pl. 9, Fig. 1, for the adult.

- Picus erythrocephalus*, LINN. *Syst.* I, p. 174, Sp. 7. *Mus. Adolph. Frid.* II, p. 21.
 BRISS. *Orn.* IV, p. 52, Sp. 19, Pl. 3, Fig. 1. *Id.* 8vo. II, p. 50. GMEL. *Syst.* I,
 p. 429, Sp. 7. BOROWSK, *Nat.* II, p. 136, Sp. 4. LATH. *Ind.* p. 227, Sp. 9, adult.
 VIEILL. *Ois. Am. Sept.* II, p. 60, Pl. 112, adult; Pl. 113, young.
Picus obscurus, GMEL. *Syst.* I, p. 429. LATH. *Ind.* p. 228, Sp. 11, young.
Picus capite toto rubro, the Red-headed Woodpecker, CATESBY, *Car.* I, Pl. 20, adult.
Picus capite colloque rubris, KLEIN, *Av.* p. 28, Sp. 12, adult.
Picus capite toto rubro, KALM, *It.* III, Pl. 43, adult.
Picchio di testa rossa, *Storia degli Ucc.* Pl. 170, adult.
Pic noir à domino rouge, BUFF. *Ois.* VII, p. 55, adult.
Pic de Virginie, BUFF. Pl. enl. 117, adult.
Pic tricolor, VIEILL. *l. c.* adult and young.
 Red-headed Woodpecker, PENN. *Arct. Zool.* Sp. 160. KALM, *Trav. (Angl.)* II, p. 86.
 LATH. *Synop.* II, p. 561, adult.
 White-rumped Woodpecker, LATH. *Syn.* II, p. 563, Sp. 10, young.

THE state in which the common Red-headed Woodpecker is here represented, has given rise to a nominal species; and it is in fact so difficult to recognise for that bird, that we have thought proper, after the example of Vieillot, to give an exact figure of it. We feel no diffidence in affirming, that in this, through the exertions of Messrs. Rider and Lawson, we have fully succeeded; and it will perhaps be allowed to be the best representation of a bird ever engraved. We have nothing to add to Wilson's excellent account of the manners of this very common

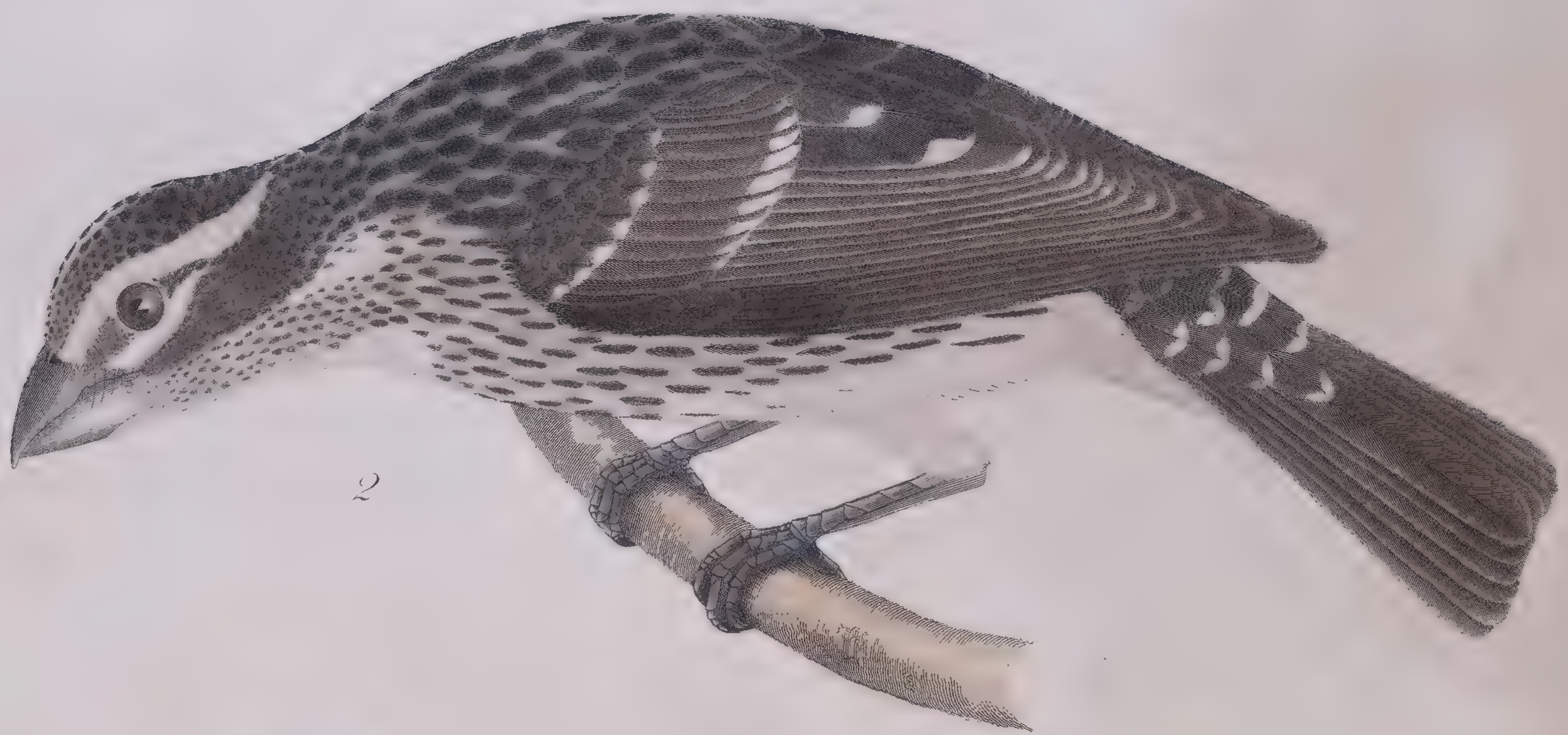
species, and therefore shall limit ourselves to the description of the young as represented.

The young Red-headed Woodpecker is nine and a half inches long, and seventeen inches in extent. The bill is short and robust, being but one-eighth more than an inch in length: the upper mandible has the ridge slightly curved: the bill is horn colour, whitish at base beneath; the setaceous feathers covering the nostrils are very short, and not thick, rufous gray tipped with black; the whole head, neck, and upper parts of the breast, (which are red in the adult) are blackish, each feather broadly edged with whitish, giving the throat the appearance of being whitish streaked with blackish; the auriculars are plain dusky black; from the breast beneath all is dingy white, the feathers of the breast and lower tail-coverts having dusky shafts: the back and scapulars are black, the feathers being margined with whitish gray; the rump and upper tail-coverts pure white; the wings are five inches and a half long; the spurious feather very short, the first primary subequal to the fifth, the second to the fourth, the third being longest; the smaller wing-coverts are uniform with the back; the larger are of a deeper black, and tipped with pure white; the spurious wing is wholly deep black; the under wing-coverts are pure white, blackish along the margin of the wing; the primaries are plain black, tipped and edged externally with whitish; the secondaries are white, shafted with black, and with an acuminate, broad, subterminal band, which running from one to the other, takes a zigzag appearance; the tail is four inches long, and, like those of all the Woodpeckers we have examined, composed of twelve feathers, of which the outer on each side is extremely short and inconspicuous, and pure white, with a black shaft. All the others, which are very acute, longer, and more acuminate, and stiffer as they approach the centre, are black, and except the two middle ones, slightly whitish each side of the shaft

at tip, the outer being also of that colour on its outer margin. The feet are dark plumbeous, the tarsus being seven-eighths of an inch long, and feathered for a short space in front.

The young of both sexes are, no less than the adult, perfectly alike; as they advance in age, the margins of the feathers disappear, and the black becomes deep and glossy, and all the colours much purer; the scarlet of the head comes on very gradually, so that specimens are found with merely a reddish tinge, and generally with a few dots on the hind neck: it is one of these specimens with a few streaks of red, that we have selected for the sake of ornamenting the plate, as well as to exemplify the manner in which the change takes place. No such mark appears at first.

In the adult the whole head, neck, and breast, are bright and deep scarlet, with the feathers black at base; the back, scapulars, and smaller wing-coverts are rich glossy black; the rump, upper tail-coverts, and from the breast beneath, white, the bottom of the plumage being plumbeous, and the tail-coverts with blackish shafts; the wings and tail are black; the lower wing-coverts pure white, with the margin of the wing deep black; the secondaries are white, shafted to near the tip with black; the last of the primaries being also white at tip, and on the greater part of the base of the outer vane; the small lanceolate outer feather is white, black on the shaft and base of the inner vane; the two next only being tipped with white, the outer of which is also white on the exterior margin.



Drawn from Nature by A. Riber.

Engraved by Alexander Lawson.

¹ Evening Grosbeak. ² Female Rose-breasted Grosbeak. ³ Female White-winged Crossbill. ⁴ Female Indigo Finch.
Fringilla Vespertina. Fringilla Ludoviciana. Loxia Leucoptera. Fringilla Cyanea.

EVENING GROSBEAK.

FRINGILLA VESPERTINA.

Plate XV. Fig. 1.

Fringilla vespertina, COOPER, in *Ann. Lyc. New-York*, I, p. 220. *NoB. Cat. Birds*, U. S. Sp. 188, in *Contr. Mael. Lyc. Phila.* I, p. 21. *Id. Syn. Birds*, U. S. Sp. 188, in *Ann. Lyc. N. Y.* II, p. 113. *Id. Suppl. in Zool. Journ. London*, IV, p. 2.

Cabinet of the Lyceum of Nat. Hist. of New-York.

Mr. Leadbeater's Collection in London.

FEW birds could form a more interesting acquisition to the Fauna of any country than this really fine Grosbeak. Beautiful in plumage, peculiar in its habits, important to systematical writers, it combines advantages of every kind. It was named and first described by Mr. Cooper, and little has since been discovered of its history to be added to the information he has collected and given us in the journal above quoted. The species appears to have an extensive range in the northern and north-western parts of this continent, being met with from the extremity of the Michigan Territory to the Rocky Mountains, within the same parallels. It is common about the head of Lake Superior, at Fond du Lac, and near the Athabasca Lake. A few were observed by Mr. Schoolcraft during the first week of April, 1823, about Sault Sainte Marie, Michigan Territory, where they remained but a short time, and have not appeared since; and by Major Delafield in the month of August of the same year, near the Savannah river, north-west from Lake Superior. They appear to retire during the day to the deep swamps of that lonely

region, which are covered with a thick growth of various trees of the coniferous order, and only leave them in small parties at the approach of night. Their note is strange and peculiar, and it is only at twilight that they are heard crying in a singular strain. This mournful sound, uttered at such an unusual hour, strikes the traveller's ear, but the bird itself is seldom seen; though, probably from its unacquaintance with man, it is so remarkably tame and fearless as almost to suffer itself to be caught with the hand.

The specimen of the Evening Grosbeak presented to the Lyceum of New-York by Mr. Schoolcraft, from which Mr. Cooper established the species, was thought until lately the only one in possession of civilized man; but we have since examined two others shot early in the spring on the Athabasca Lake, near the Rocky Mountains, and preserved among the endless treasures of Mr. Leadbeater of London. From the more perfect of these, our plate, already engraved from Mr. Cooper's specimen, has been faithfully coloured; and the subjoined description is carefully drawn up from a perfect specimen now before us, which Mr. Leadbeater with the most obliging liberality has confided to our charge.

Although we consider the Grosbeaks (*Coccothraustes*) as only a subgenus of our great genus *Fringilla*, they may with equal propriety constitute one by themselves; as the insensible degrees by which intermediate species pass from one form into another, (which determined us in considering them as a subgenus, and not a genus) are equally observable between other groups, though admitted as genera. *Coccothraustes* is as much entitled to be distinguished generically from *Fringilla*, as *Turdus* from *Sylvia*; and at all events, its claim is full as good, and perhaps better, than its near relation *Pyrrhula*. In the present work, however, we have preferred retaining things as we found them, until we can

apply ourselves to the work of a general reform, as announced in the first article of this volume. Though we regard the Grosbeaks as a subgenus, others going to the opposite extreme, have erected them into a separate family, composed of several genera. The Evening Grosbeak is however so precisely similar in form to the Hawfinch-type of the group, as to defy the attempts of the most determined innovators to separate them. Its bill is as broad, as high, quite as strong and turgid, with both mandibles equal, the upper depressed and rounded above, and the commissure straight. It conforms even, in a slight degree, in the rhomboidal shape of the ends of the secondaries, a character so conspicuous in its analogue; to which, in the distribution and transitions of its tints, though very different, it also bears a resemblance. It is however of the four North American species of its group, the only one so strictly allied, for even the Cardinal Grosbeak, the most nearly related of these species, on account of its short rounded wings and other minor traits, might be separated, though fortunately it has not as yet to our knowledge: the others have been already.

The Evening Grosbeak is eight and a half inches long; its bill is of a greenish yellow, brighter on the margins, seven-eighths of an inch long, five-eighths broad, the same in height; the capistrum and lora are black: the front is widely bright yellow, prolonged in a broad stripe over the eye to the ears; the hind crown is black, intermixed with yellow, visible only on separating the feathers, but leading to the suspicion that at some period the yellow extends perhaps all over the crown: the sides and inferior parts of the head, the whole neck above and beneath, together with the interscapulars and breast, are of a dark olive brown, becoming lighter by degrees; the scapulars are yellow, slightly tinged with greenish; the back, rump, with the whole lateral and inferior surface, including the under wing and under tail-coverts, yellow, purer on the rump, and somewhat tinged with olive brown on the

belly. Although these colours are all very pure, they are not definitely separated, but pass very insensibly into each other; thus the black of the crown passes into the dark brown of the neck, which becoming lighter by degrees, is blended with the yellow of the back: the same thing takes place beneath, where the olive brown of the breast passes by the nicest gradations into the yellow of the posterior parts: the whole base of the plumage is pale bluish plumbeous, white before the tips of the feathers; the femorals are black skirted with yellow; the wings are four and a half inches long; the smaller, middling, and exterior larger wing-coverts are deep black, as well as the spurious wing; those nearest the body are white, black at the origin only; the quills are deep black, the three outer being subequal and longest, attenuated on their outer web at the point, and inconspicuously tipped with whitish; the secondaries are marked with white on their inner web, that colour extending more and more as they approach the body, the four or five nearest being entirely pure white, like their immediate coverts, and slightly and inconspicuously edged with yellow externally; the tail is two and a half inches long, slightly forked, and as well as its long superior coverts, very deep black; the outer feather on each side has on the inner vane, towards the tip, a large, roundish, white spot, which seems disposed to become obliterated, as it is much more marked on one, than on that of the other side which corresponds to it, and does not exist in all specimens: a similar spot is perceptible on the second tail-feather, where it is however nearly obliterated; the feet are flesh colour, the nails blackish, the tarsus measuring three-quarters of an inch.

No difference of any consequence is observable between the sexes; though it might be said that the female is a little less in size, and rather duller in plumage.

FEMALE ROSE-BREASTED GROSBEAK.

FRINGILLA LUDOVICIANA.

Plate XV. Fig. 2.

See *Rose-breasted Grosbeak*, *Loxia rosea*, (*ludoviciana*) WILS. *Am. Orn.* II, p. 135, Pl. 17, Fig. 1, for the Male.

Loxia ludoviciana, LINN. *Syst.* I, p. 306, Sp. 38. GMEL. *Syst.* I, p. 862, Sp. 38. LATH. *Ind.* p. 379, Sp. 25.

Fringilla punicea, GMEL. *Syst.* I, p. 921, Sp. 81. LATH. *Ind.* p. 444, Sp. 34, adult male.

Loxia maculata, GMEL. *Syst.* I, p. 861, Sp. 87. LATH. *Ind.* p. 379, Sp. 26, young.

Loxia obscura, GMEL. I, p. 862, Sp. 88. LATH. *Ind.* p. 379, Sp. 27, female.

Coccothraustes ludoviciana, BRISS. *Orn.* III, p. 247, Sp. 14, Pl. 12, Fig. 2. ID. *8vo.* I, p. 378.

Coccothraustes rubricollis, VIEILL. *Gal. Ois.* I, Pt. II, p. 67, Pl. 58 (very bad), and *Dict. Pyrrhula ludoviciana*, SABINE, *Zool. App. to Frankl. Exp.* p. 675.

Fringilla ludoviciana, NOB. *Obs. Nom. Wils. Orn.* Sp. 80. ID. *Cat. Birds U. S.* Sp. 189. ID. *Syn. Birds U. S.* Sp. 189.

Guiraca ludoviciana, SWAINSON, *Syn. Mex. Birds*, Sp. 76, in *Phil. Mag. N. S.* I, p. 438. *Le Rose-gorge*, BUFF. *Ois.* III, p. 460.

Gros-bec de la Louisiane, BUFF. Pl. enl. 153, Fig. 2, male.

Moineau à poitrine et ventre pourprés, SONN. *Buff.* XLVIII, p. 240.

Red-breasted Grosbeak, PENN. *Arct. Zool.* Sp. 212. LATH. *Syn.* III, p. 126, Sp. 24.

Red-breasted Finch, PENN. *Arct. Zool.* Sp. 275. LATH. *Syn.* III, p. 272, Sp. 30, adult male.

Dusky Grosbeak, PENN. *Arct. Zool.* Sp. 216. LATH. *Syn.* III, p. 127, Sp. 26, female.

Spotted Grosbeak, PENN. *Arct. Zool.* Sp. 213. LATH. *Syn.* III, p. 126, Sp. 25, young.

Philadelphia Museum, No. 5806, Male; 5807, Female.

THOUGH several figures have been published of the very showy male Rose-breasted Grosbeak, the humble plumage of the female and young has never been represented. It would however have

better served the purposes of science if the preference had been given to the latter, though less calculated to attract the eye, inasmuch as striking colours are far less liable to be misunderstood or confounded in the description of species, than dull and blended tints. It will be seen by the synonymy, that nominal species have in fact been introduced into the systems. But if it be less extraordinary that the female and young should have been formed into species, it is certainly unaccountable that the male itself should have been twice described in the same works, once as a Finch, and once as a Grosbeak. This oversight originated with Pennant, and later compilers have faithfully copied it, though so easy to rectify.

The Female Rose-breasted Grosbeak is eight inches long, and twelve and a half inches in extent. The bill has not the form either of the typical Grosbeaks, or of the Bullfinches, but is intermediate between them, though more compressed than either: it is three-quarters of an inch long, and much higher than broad; instead of being pure white, as that of the male, it is dusky horn-colour above, and whitish beneath and on the margins; the irides are hazel brown; the crown is of a blackish brown, each feather being skirted with lighter olive brown, and faintly spotted with white on the centre; from the nostrils a broad band passes over the eye, margining the crown to the neck; a brown streak passes through the eye, and the inferior orbit is white: more of the brown arises from the angle of the mouth, spreading on the auriculars; on the upper part of the neck above, the feathers are whitish edged with pale flaxen, and with a broad, oblong, medial, blackish brown spot at tip; on the remaining part of the neck and interscapulars this blackish spot is wider, so that the feathers are properly of that colour, broadly edged with pale flaxen; the back and rump, and the upper tail-coverts are of a lighter brown, with but a few merely indicated and lighter spots; the whole inferior

surface of the bird is white, but not very pure; the sides of the throat are dotted with dark brown, the dots occupying the tips of the feathers; the breast and flanks are somewhat tinged with flaxen, (more dingy on the latter) and each feather being blackish along the middle at tip, those parts appear streaked with that colour; the middle of the throat, the belly, and under tail-coverts are unspotted; the base of the plumage is every where plumbeous; the wings are rounded, less than four inches long, entirely dusky brown, somewhat darker on the spurious wing, all the feathers, both quills and coverts, being lighter on their edges; the exterior webs of the middle and larger wing-coverts are whitish at tip, constituting two white bands across the wings; the primaries are whitish at the origin beneath the spurious wing; the secondaries are inconspicuously whitish externally at tip, that nearest the body having a very conspicuous whitish spot: the lower wing-coverts are of a bright buff, and as they are red in the male, afford an excellent essential character for the species: the tail is three inches long, nearly even, and of a paler dusky brown; the two outer feathers are slightly edged internally with whitish, but without the least trace of the large spot so conspicuous in the male, and which is always more or less apparent in the young of that sex: the feet are dusky, the tarsus measuring seven-eighths of an inch.

The young male is at first very similar to the female, and is, even in extreme youth, paler and somewhat more spotted; but a little of the beautiful rose colour, of which the mother is quite destitute, soon begins to make its appearance, principally in small dots on the throat: this colour spreads gradually, and the wings and tail, and soon after the head, blacken, of course presenting as they advance in age a great variety of combinations.

For the description of the beautiful adult male, we shall refer to Wilson, whose description is good, and the figure accurate,

but not having stated any particulars about the habits of the species, we shall subjoin the little that is known of them. Though long since recorded to be an inhabitant of Louisiana, whence it was first received in Europe, recent observations, and the opinion of Wilson, had rendered this doubtful, and it was believed to be altogether an Arctic bird, averse to the warm climate of the Southern states, and hardly ever appearing even in the more temperate. Its recent discovery in Mexico is therefore a very interesting and no less remarkable fact, and we may safely conclude that this bird migrates extensively according to season, spending the summer in the north, or in the mountains, and breeding there; and in winter retiring southward, or descending into the plains; being however by no means numerous in any known district, or at any season, though perhaps more frequent on the borders of Lake Ontario. Its favourite abode is large forests, where it affects the densest and most gloomy retreats. The nest is placed among the thick foliage of trees, and is constructed of twigs outside, and lined with fine grasses within; the female lays four or five white eggs, spotted with brown. This may also be called an "Evening Grosbeak," for it also sings during the solemn stillness of night, uttering a clear, mellow, and harmonious note.

We have placed this species in our subgenus *Coccothraustes*. It is probably because he laboured under the mistake that all the Grosbeaks removed from *Loxia* had been placed in *Pyrrhula* by Temminck, that Mr. Sabine has made it a Bullfinch: and in truth the bill very much resembles those of that genus, so that the species is intermediate between the two. Mr. Swainson places it, together with the Blue Grosbeak, *Fringilla* (*Coccothraustes*) *cærulea*, in a new genus which he calls *Guiraca*, but without as yet characterizing it. These species have, it is true, a bill somewhat different from that of the typical *Coccothraustes*, (as may be seen

FEMALE ROSE-BREASTED GROSBEAK. 83

by comparing this with the Evening Grosbeak) being much less thick and turgid, and higher than broad; the upper mandible being larger than the lower, and covering its margins entirely, compressed on the sides, making the ridge very distinct, (not rounded above) and curved from the base, but at tip especially: the margins of both are angular. The representation of the bill in Wilson's plate of the male is remarkably exact.

FEMALE WHITE-WINGED CROSSBILL.

LOXIA LEUCOPTERA.

Plate XV. Fig. 3.

See WILSON'S *American Ornithology*, IV, p. 48, Pl. 41, for the young male.*Loxia leucoptera*, GMEL. *Syst.* I, p. 844, Sp. 12. VIEILL. *Gal. Ois.* I, p. 56, Pl. 52, young male. NOB. *Obs.* Sp. 84. ID. *Cat. and Syn. Birds U. S.* Sp. 195.*Loxia falcistrostra*, LATH. *Ind.* p. 371, Sp. 2.*Le Bec-croisé leucoptère*, SONN. *Buff.* XLVII, p. 65. VIEILL. *Nouv. Dict. Hist. Nat.* 2d ed. III, p. 339.*White-winged Crossbill*, LATH. *Syn.* III, p. 108, Sp. 2. ID. *Suppl.* p. 148. DIXON, *Voy. t.* 20, p. 358, female. PENN. *Arct. Zool.* II, Sp. 208.*My Collection*, Male, Female, young, and middle-aged.

THE White-winged Crossbill, first made known by Latham in his celebrated Synopsis, was subsequently introduced on his authority into all the huge compilations of the last century. Wilson gave us the first figure of it, which is that of the male, and promised a representation of the female, together with "such additional facts relative to its manners as he might be able to ascertain." It is to fulfil Wilson's engagement that we now give a correct figure of the other sex of this species, which we are also enabled to describe minutely in all its different states of plumage. This has never before been done, though Vieillot, since Wilson's time, has compiled some account of its habits, described the female, and recently published a bad enough figure of the male in his *Galerie des Oiseaux*.

The English name was bestowed by its discoverer, the scientific

was imposed on it by the compiler Gmelin, who like the Daw in the fable, though with much better success, appropriated to himself the borrowed plumes of others, making Latham's new species his own by being the first to give them scientific names, which the discoverer himself was afterwards obliged to adopt in his *Index Ornithologicus*. In the present instance however he took the liberty of altering Gmelin's name, most probably with the view of giving one analogous to that of *Loxia curvirostra*, and indicative of the remarkable form of the bill. That character having since been employed as generic, the propriety of Latham's change has ceased to exist, and in fact the advantage is altogether on the side of Gmelin. We have therefore respected the right of priority, even in the case of an usurper.

The Female White-winged Crossbill is five inches and three-quarters long, and nearly nine in extent; the bill is more than five-eighths long, of a dark horn colour paler on the edges; as is the case in the whole genus, it is very much compressed throughout, but especially at the point, where the edges almost unite into one: both mandibles are curved (the lower one upwards) from the base, the ends crossing each other; the upper has its ridge distinct, and usually crosses to the left in both sexes, and not, as Wilson appears to intimate, generally in one sex only; the lower mandible is considerably shorter; the tongue is short, cartilaginous, and entire: the irides are of a very dark hazel; the small setaceous feathers covering the nostrils, which is one of the characteristics of the genus, are whitish gray; the bottom of the plumage is every where slate colour; the head, and all the upper parts down to the rump, are of a grayish green strongly tinged with olive, each feather being marked with black in the centre, giving the plumage a streaked appearance, as represented in the plate; the rump is pure pale lemon yellow, the upper tail-coverts are blackish margined with

whitish olive; the front, and a broad line over and round the eye and bill, are slightly distinguished from the general colour of the head by the want of olivaceous, being grayish white, and as the feathers are very small, appear minutely dotted with black: the curved blackish spot, more apparent in the colours of the male, is slightly indicated on the sides of the head; the sides of the head and neck, the throat, and the breast, are of a grayish white, also streaked with blackish, and somewhat tinged with yellowish on the sides of the breast; the flanks become of a dingy yellowish gray, and have large dull blackish blotches; the belly and vent are of a much purer whitish, and the streaks are on that part long, narrow, and well defined; the under tail-coverts are blackish, with broad white margins, the wings are three inches and a half long, reaching when closed to the last of the tail-coverts; the first three primaries are subequal and longest, the fourth being but little shorter, and much longer than the succeeding; the general colour of the wing is black, the smaller coverts each margined with olive; the middle and longer coverts broadly tipped with white, forming a double band across the wings, so conspicuous as to afford the most obvious distinguishing character of the species; all the quills are slightly edged with paler, the tertials being also tipped with white; the under wing-coverts are of a dark silvery, as well as the whole inferior surface of the wing; the tail measures two and a half inches, being as usual composed of twelve feathers; it is black, and deeply emarginate, the feathers acute, and slightly edged with paler: the feet are short, rather robust, and blackish, the tarsus five-eighths of an inch in length, somewhat sharp behind, with its covering entire before; the toes are divided to the base, very short, the middle one considerably the longest, but much less than half an inch long, the lateral one subequal, (all these being remarkable characters of the genus) the hind toe long, and

stoutest; the nails strong, much curved, and sharp, the hind one the longest, and twice as large as the lateral.

The male described by Latham, Wilson and Vieillot as in full plumage, but which, with Temminck, we have good reasons for believing to be between one and two years old, differs from the female in being a trifle larger, and of a crimson red where she is olive gray: the base of the plumage is also considerably darker, approaching to black on the head, which colour predominates in several parts of the plumage, round the eye, on the front, in a broad line curving and widening from the eye each side of the neck, and appearing distinctly on the back, where it generally forms a kind of band descending from the base of the wing: the rump is of a beautiful rose-red; the black of the wings and tail is deeper; the white pure, and more extended; the lining of the quills, and especially of the tail-feathers, more conspicuous; the belly is of a pure whitish, much less streaked, &c.

The bird which from analogy we take for the adult male, though we have no positive evidence for deciding whether it is in the passage to, or from, the preceding, differs only in having a light buff orange tinge where the other has crimson: it agrees with it in all its minute markings, the patch on the sides of the head is better defined, and the wings and tail are of a still deeper black, the edges of the quills and tail-feathers being very conspicuous, and almost pure white. All these facts conspire to favour our opinion. In this state the bird is rare, as might be expected, and has not before been noticed by any naturalist: we have not represented it, only that we might not multiply figures of the same species.

The very young male before assuming the red, at the age of one year, exactly resembles the female; being only more grayish, and less tinged with olive, and having the rump greenish yellow, instead of yellow.

The four above described states of plumage are selected from a number of specimens shot on the same day and out of the same flock. The changes of these birds must still rank among the unexplained phenomena of Natural History. An illustration might be attempted by supposing a double moult to take place in the birds of this genus, but besides that we ought to be cautious in admitting an hypothesis like this not founded on observation, it would be entirely untenable in the present instance, from the fact that all the variations of plumage are found at the same period of the year, thus proving that age, and of course sex, but not season, produce these changes; and we must provisionally admit, that contrary to what takes place in all other birds, these (the Crossbills) together with the Pine-Bullfinches, lose, instead of acquiring brilliancy of colours as they advance in age.

This species inhabits during summer the remotest regions of North America, and it is therefore extraordinary that it should not have been found in the analogous climates of the old continent. In this, its range is widely extended, as we can trace it from Labrador, westward to Fort de la Fourche in latitude 56°, the borders of Peace river, and Montague Island on the North-west coast, where it was found by Dixon. Round Hudson's Bay it is common and well known, probably extending far to the north-west, as Mackenzie appears to allude to it when speaking of the only land bird found in the desolate regions he was exploring, which enlivened with its agreeable notes the deep and silent forests of those frozen tracts. It is common on the borders of Lake Ontario, and descends in autumn and winter into Canada and the Northern and Middle states. Its migrations however are very irregular. During four years it had escaped my careful researches, and now while writing (in the first week of November, 1827) they are so abundant, that

I am able to shoot every day great numbers out of flocks that are continually alighting in a copse of Jersey scrub-pine (*Pinus inops*) even opposite my window. It is proper to mention, that owing perhaps to the inclemency of the season, which has so far been distinguished by rains, early frost, and violent gales of wind, there have been extraordinary flights of winter birds. Many flocks of the Purple Finch are seen in all directions. The American Siskin, (*Fringilla pinus*, Wils.) of which I never saw a living specimen before, covers all the neighbouring pines and its favourite thistles with its innumerable hosts. The Snow-Bunting (*Emberiza nivalis*) has also made its appearance in New-Jersey, though in small parties, after an absence of several years.

The White-winged Crossbills generally go to Hudson's Bay on their return from the south, and breed there, none remaining during summer even in the most northern parts of the United States, where they are more properly transient irregular visitors, than even winter residents. They are seldom observed elsewhere than in pine swamps and forests, feeding almost exclusively on the seeds of these trees, together with a few berries. All the specimens I obtained had their crops filled to excess entirely with the small seeds of *Pinus inops*. They kept in flocks of from twenty to fifty, when alarmed suddenly taking wing all at once, and after a little manœuvring in the air, generally alighting again nearly on the same pines whence they had set out, or adorning the naked branches of some distant, high, and insulated tree. In the countries where they pass the summer, they build their nest on the limb of a pine, towards the centre; it is composed of grasses and earth, and lined internally with feathers. The female lays five eggs, which are white, spotted with yellowish. The young leave their nest in June, and are soon able to join the parents in their autumnal migration.

In the northern countries, where these birds are very numerous,
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when a deep snow has covered the ground they appear to lose all sense of danger, and by spreading some favourite food, may be knocked down with sticks or even caught by hand while busily engaged in feeding. Their manners are in other respects very similar to those of the common Crossbill, as described by Wilson, and they are said also to partake of the fondness for saline substances so remarkable in that species.

FEMALE INDIGO FINCH.

FRINGILLA CYANEA.

Plate XV. Fig. 4.

See WILSON'S *American Ornithology*, I, p. 100, Pl. 6, Fig. 5, for the Male.

- Tanagra cyanea*, LINN. *Syst.* I, p. 315. Sp. 6, adult male in full plumage.
Emberiza cyanea, GMEL. *Syst.* I, p. 876, Sp. 54. LATH. *Ind.* p. 415, Sp. 60.
Emberiza cyanella, SPARM. *Mus. Carls.* II, Pl. 42, 43. GMEL. *Syst.* I, p. 887, Sp. 74.
Emberiza cœrulea, GMEL. *Syst.* I, p. 876. LATH. *Ind.* p. 415, Sp. 59, male in moult.
Tanagra cœrulea? GMEL. *Syst.* I, p. 891, Sp. 27. LATH. *Ind.* p. 427, Sp. 27, adult male.
Tanagra carolinensis cœrulea, BRISS. *Av.* III, p. 13, Sp. 6, adult male in full dress.
Emberiza canadensis cœrulea, BRISS. *Av.* III, p. 298, Sp. 12, Pl. 14, Fig. 2, male moulting.
Passerina cyanea, VIEILL. *Nouv. Dict. Hist. Nat.*
Fringilla cyanea, NOB. *Obs.* Sp. 112. *Id. Cat. and Synop. Birds U. S.* Sp. 164.
Linaria cyanea, BART. *Trav.* p. 296.
Linaria cœrulea, the *Blue Linnet*, CATESBY, *Car.* I, p. 45, Pl. 45.
Le ministre, BUFF. *Ois.* IV, p. 86.
L'azuroux, BUFF. *Ois.* IV, p. 369, male moulting.
Passe-bleu? BUFF. *Ois.* III, p. 495, adult male in full plumage.
Moineau bleu de Cayenne? BUFF. Pl. enl. 203, Fig. 2, adult male in full dress.
Blue Linnet, EDW. *Av.* IV, p. 132, Pl. 273, lower figure.
Indigo Bunting, PENN. *Arct. Zool.* II, Sp. 235. LATH. *Syn.* IV, p. 205, Sp. 53.
Blue Bunting, PENN. *Arct. Zool.* II, Sp. 234. LATH. *Syn.* III, p. 205, Sp. 52, male moulting.
Blue Tanager? LATH. *Syn.* III, p. 234, Sp. 28.

Philadelphia Museum, No. 6002, Male; 6003, Female.

THE remarkable disparity existing between the plumage of the different sexes of the common Indigo bird, renders it almost indispensably requisite that the female, unaccountably neglected

by Wilson, as he generally granted this distinction in similar, and often in less important cases, should be figured in this work. Hardly any North American bird more absolutely stands in need of being thus illustrated than the beautiful Finch which is now the subject of our consideration. It could scarcely be expected that the student should easily recognise the brilliant Indigo bird of Wilson's first volume, in the humble garb in which it is represented in the annexed plate. But however simple in its appearance, the plumage of the female is far more interesting and important than that of the male, as it belongs equally to the young, and to the adult male after the autumnal moult, and previous to the change which ensues in the spring; a large proportion of the life of the bird.

The importance of a knowledge of these changes will also be duly estimated on recurring to the copious synonymy at the head of our article, by which it will be seen, that several nominal species have been made by naturalists who chanced to describe this bird during its transitions from one state to another. Errors of this kind too frequently disfigure the fair pages of zoology, owing to the ridiculous ambition of those pseudo-naturalists, who without taking the trouble to make investigations, for which indeed they are perhaps incompetent, glory in proclaiming a new species established on a single individual, and merely on account of a spot, or some such trifling particular! The leading systematists who have enlarged the boundaries of our science have too readily admitted such species, partly compelled to it perhaps by the deficiency of settled principles. But the more extensive and accurate knowledge which ornithologists have acquired within a few years relative to the changes that birds undergo, will render them more cautious, in proportion as the scientific world will be less disposed to excuse them for errors arising from this source. Linné may be profitably resorted to as a model of accuracy in

this respect, his profound sagacity leading him in many instances to reject species which had received the sanction even of the experienced Brisson. Unfortunately, Gmelin, who pursued a practice directly the opposite, and compiled with a careless and indiscriminating hand, has been the oracle of zoologists for twenty years. The thirteenth edition of the *Systema Naturæ* undoubtedly retarded the advancement of knowledge instead of promoting it, and if Latham had erected his ornithological edifice on the chaste and durable Linnean basis, the superstructure would have been far more elegant. But he first misled Gmelin, and afterwards suffered himself to be misled by him, and was therefore necessarily betrayed into numerous errors, although he at the same time perceived and corrected many others of his predecessor. We shall not enumerate the nominal species authorized by their works in relation to the present bird, since they may be ascertained by consulting our list of synonyms. On comparing this list with that furnished by Wilson, it will be seen that the latter is very incomplete. Indeed, as regards synonymy, Wilson's work is not a little deficient; notwithstanding which however, it will be perpetuated as a monument of original and faithful observation of nature, when piles of pedantic compilations shall be forgotten.

We refer our readers entirely to Wilson for the history of this very social little bird, only reserving to ourselves the task of assigning its true place in the system. As we have already mentioned in our "Observations," he was the first who placed it in the genus *Fringilla*, (to which it properly belongs) after it had been transferred from *Tanagra* to *Emberiza* by former writers, some of whom had even described it under both, in one and the same work. But although Wilson referred this bird to its proper genus, yet he unaccountably permitted its closely allied species the *Fringilla ciris*, to retain its station in *Emberiza*, being under

the erroneous impression that a large bill was characteristic of that genus. This mistake however is excusable, when we consider that almost all the North American birds which he found placed in it, through the negligence or ignorance of his predecessors, are in fact distinguished by large bills.

The transfer of this species to the genus *Fringilla*, renders a change necessary in the name of *Loxia cyanea* of Linné, an African bird, now a *Fringilla* of the subgenus *Coccothraustes*. The American bird belongs to *Spiza*, and together with the *Fringilla ciris*, and the beautiful *Fringilla amcena*, it may form a peculiar group, allied to *Fringilla*, *Emberiza*, and *Tanagra*, but manifestly nearest the former.

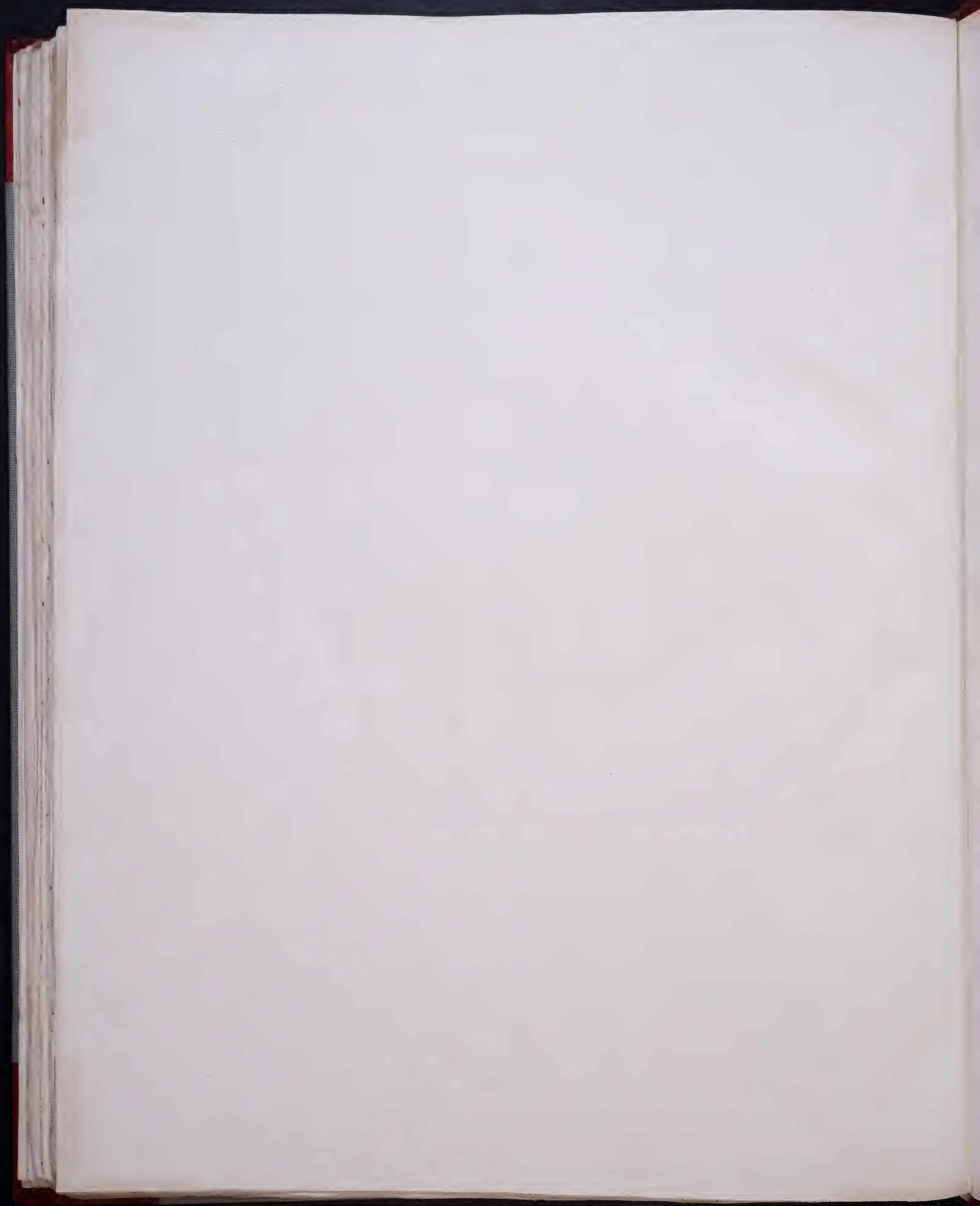
The adult Male in full plumage having been described by Wilson, may be omitted here. The Female measures four inches and three-quarters in length, and nearly seven in extent. The bill is small, compressed, and less than half an inch long, is blackish above and pale horn colour beneath; the irides are dark brown; above she is uniformly of a somewhat glossy drab; between the bill and eyes, and on the cheeks, throat, and all the inferior parts, of a reddish clay colour, much paler on the belly, dingy on the breast, and strongly inclining to drab on the flanks, blending into the colour of the back, the shafts of the feathers being darker, giving somewhat of a streaked appearance: the whole base of the plumage is lead colour; the wings and tail are of a darker and less glossy brown, each feather being edged with lighter, more extended on the secondaries, and especially the wing-coverts; the wings are two inches and a half long, not reaching when folded beyond the tail-coverts; the first primary is subequal to the fourth, the second and third being longest; the three outer besides the first, are greatly attenuated on the outer web half an inch from the point, where it is extremely narrow; the tail is two inches in length, and but slightly emar-

ginated; the feet are dusky, the tarsus measuring three-quarters of an inch.

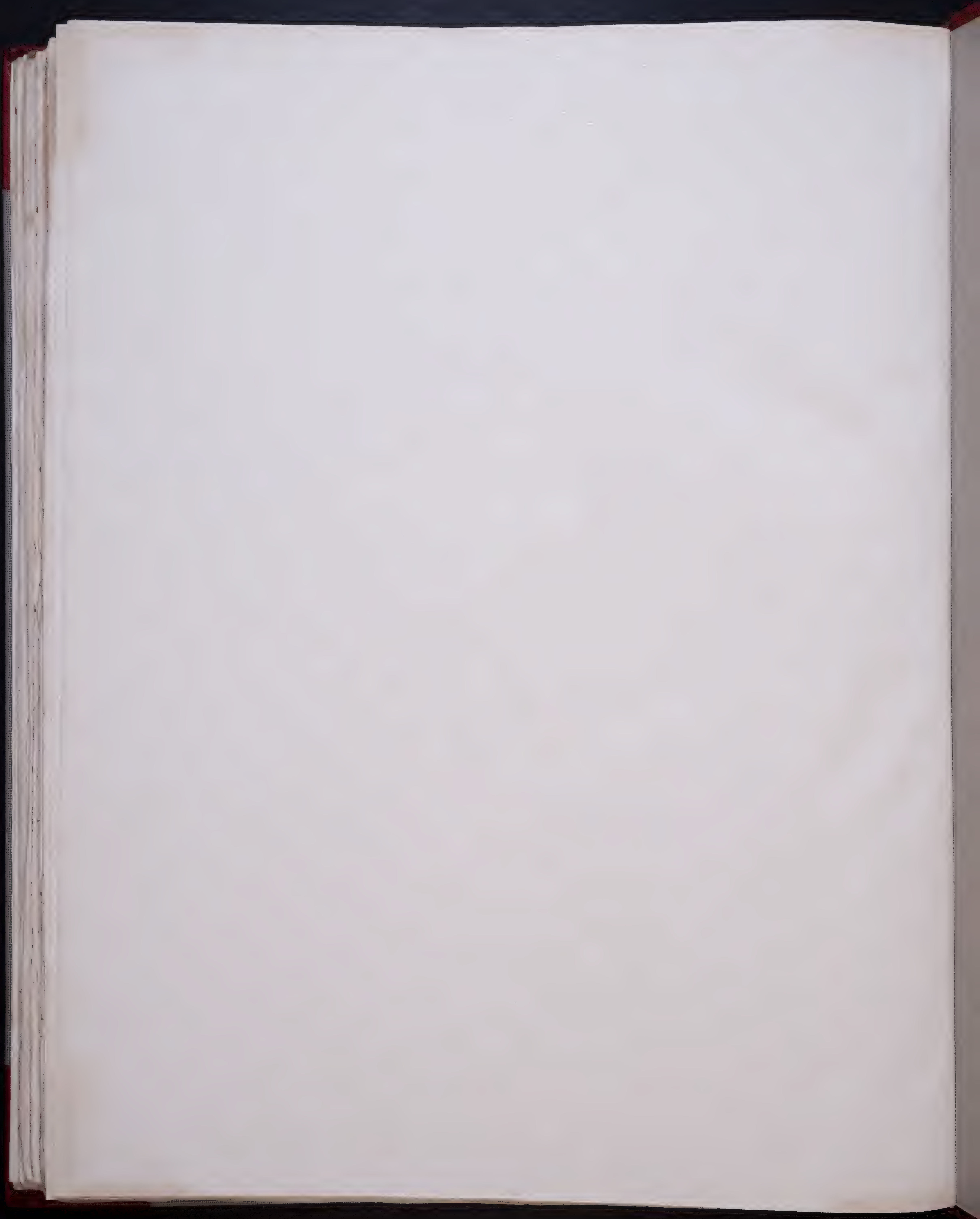
The male, after his autumnal moult, exhibits pretty much the same dress, except being more or less tinged with bluish. We shall here observe, that we do not believe that the individual kept by Wilson in a cage through the winter, in which the gay plumage did not return for more than two months, formed an exception to the general law, as he supposed. We have no doubt that this circumstance is characteristic of the species in its wild state.

The young strongly resemble the female; the drab colour is however much less pure and glossy, being somewhat intermixed with dusky olive, owing to the centre of the feathers being of the latter hue. Consequently, during the progress from youth to adolescence, and even during the two periodical changes, the plumage of this bird is more or less intermixed with drab, blue, and white, according to the stage of the moulting process, some being beautifully and regularly spotted with large masses of those colours, symmetrically disposed. In one of these males, but little advanced in its changes, we readily recognise the *Emberiza cœrulea* of authors, *Azuroux* of Buffon, &c.; and in another, which has made farther progress towards the perfect state, the shoulders only retaining the ferruginous tinge, we can trace the *Emberiza cyanella* of Sparmann.

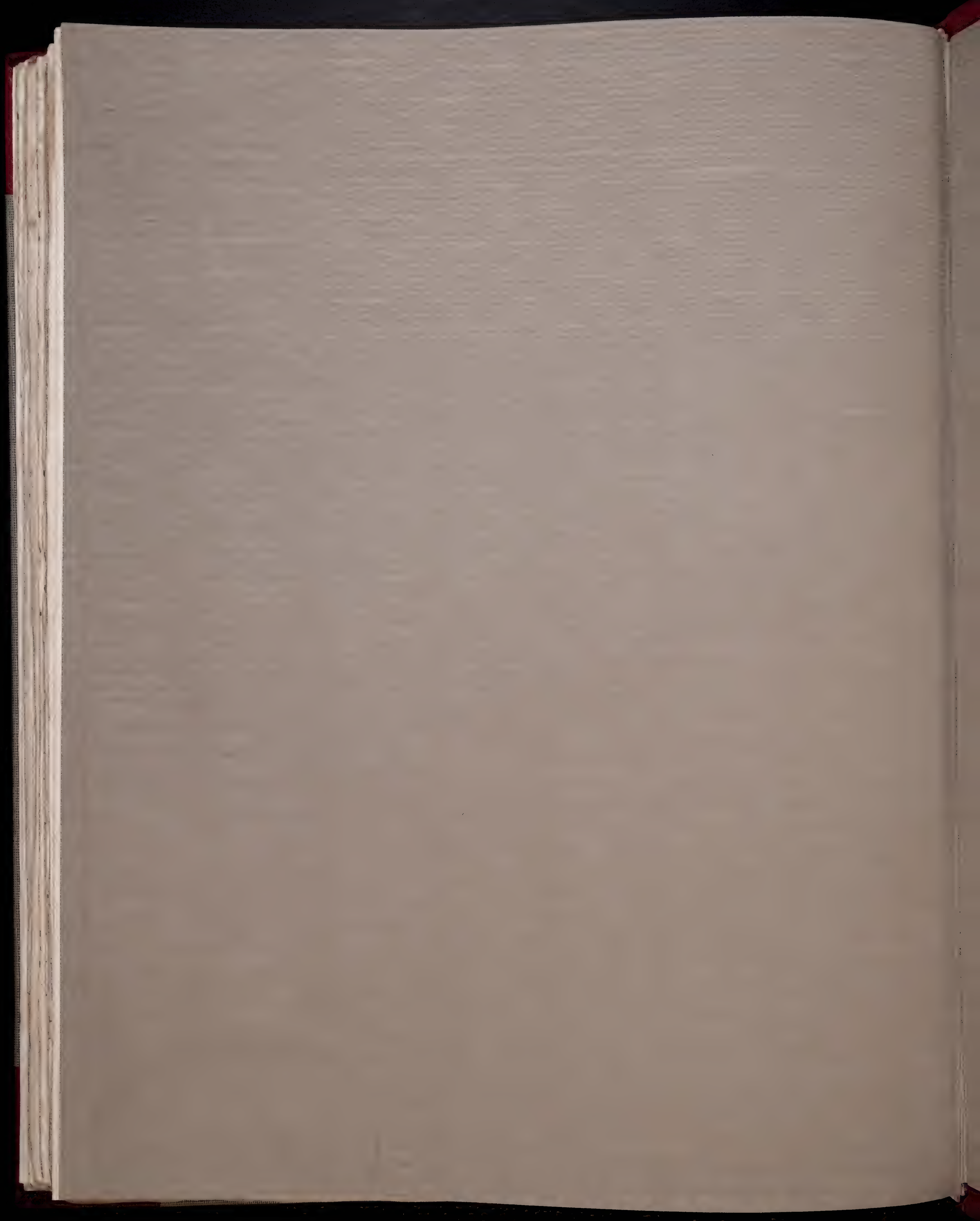


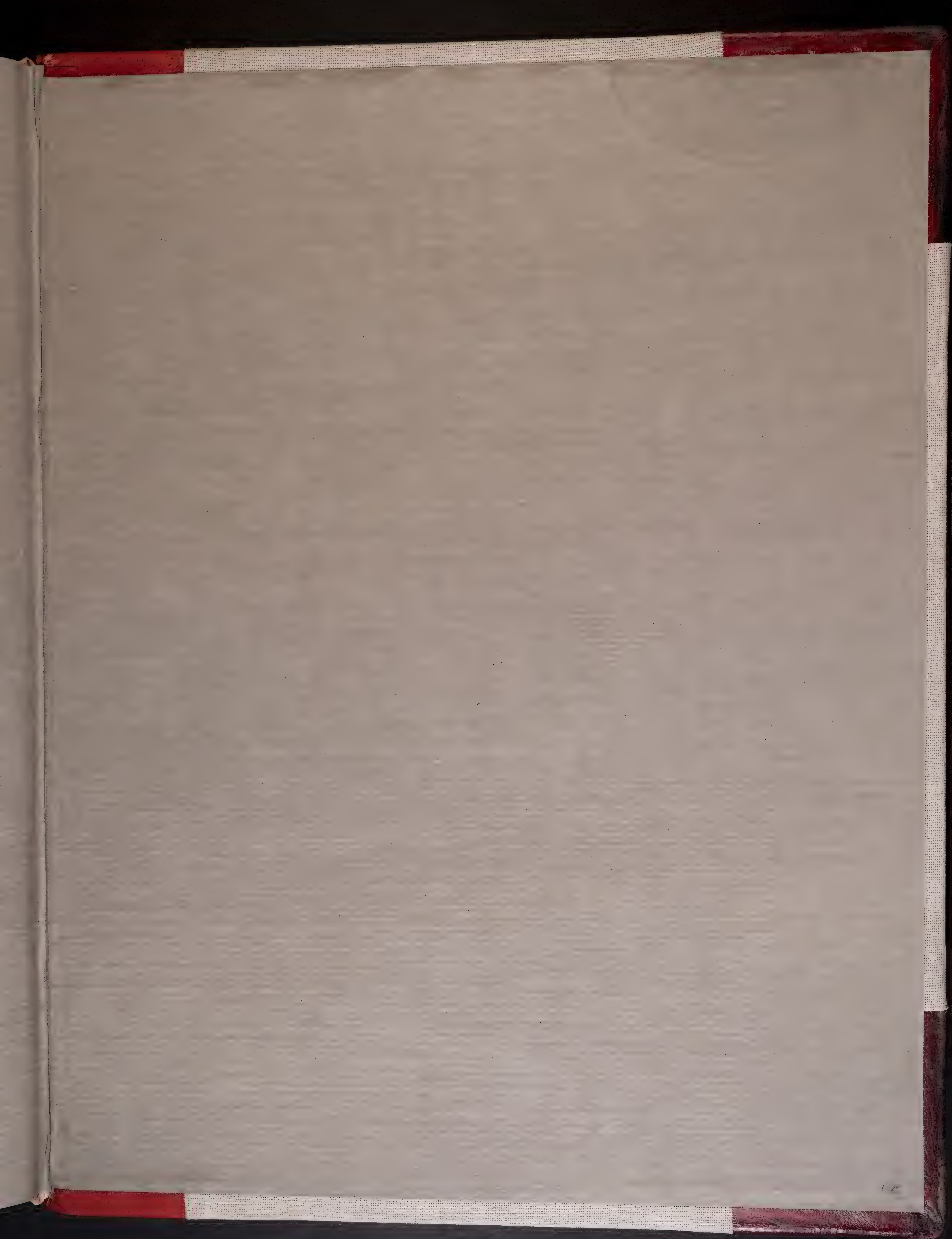




















AI

AMERICAN

ORNITHOLOGY;

OR,

THE NATURAL HISTORY

OF

BIRDS INHABITING THE UNITED STATES,

NOT GIVEN BY WILSON.

WITH FIGURES DRAWN, ENGRAVED, AND COLOURED, FROM NATURE.

BY

CHARLES LUCIAN BONAPARTE.

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